



Season 5, Episode 5: Exploring Swine Health Research

Dr. Marcelo Almeida, Iowa State University, shares about key diseases and issues currently being prioritized, and how the VDL is affectively communicating its findings to the industry.

Background

While the swine industry is facing health challenges, the Iowa State University Veterinary Diagnostic Lab (ISU VDL) has the opportunity to collaborate with producers and veterinarians to diagnose and prevent diseases. This partnership can lead to a healthier swine population and ultimately boost U.S. pork production. Additionally, the VDL monitors various swine diseases to identify emerging issues or concerns, informing future research efforts.

Disease Diagnostics

The Swine Disease Reporting System (SDRS) focuses on a select group of pathogens, including PRRSV, enteric coronaviruses, mycoplasma pneumonia, porcine circovirus types II and III, and influenza A virus. Samples sent to the ISU VDL are recorded in a system that documents the diagnosis made by pathologists, including the virus's cause and associated lesions. This system tracks records for each virus, flagging those that fall outside their normal ranges, allowing pathologists to monitor virus trends effectively.

Disease Trends

The ISU VDL monitors disease trends for PRRSV, E. coli in post-weaning pigs, astrovirus 4 associated with respiratory disease, and enteric viruses. In 2019, the ISU VDL noted an increase in E. coli cases diagnosed in post-weaning pigs, peaking in 2021. While cases decreased slightly in 2022-2023, they remained historically higher than levels observed 5-10 years ago.

Additionally, many VDLs reported a decreasing trend in PRRSV detection by PCR in 2022-2023. Typically, PRRSV shows higher detection rates in the cooler months; however, in 2024, detection remained lower yet within the normal range compared to previous years. PRRSV encompasses several lineages, with the line 1C.5 variant being the most frequently sequenced, spreading across the country and appearing in various VDLs. Recently, there has also been an uptick in the line 1C.2 virus, which has become the second most detected strain after line 1C.5.

Sharing Findings with the Industry

Each month, the Swine Disease Reporting System (SDRS) produces a report, publishes podcasts, and uploads videos to YouTube discussing that month's diagnostic cases. While the SDRS does not yet have a systematic approach for sharing findings with the industry, it disseminates information through presentations and publications. The goal is to educate stakeholders about current trends in the labs, enabling them to compare these findings with field conditions. Dr. Almeida encourages anyone with questions about the report or diagnostic cases to reach out to the ISU VDL.

For more information visit <https://fieldepi.org/sdrs/> and <https://vetmed.iastate.edu/vdl>.

To Listen to this full podcast please visit: <https://globalagnetwork.com/pigx/podcast/season-5-episode-5-exploring-swine-health-research>

