



Season 6, Episode 6: The Science Behind Sudden Sow Deaths

Dr. Chris Rademacher, Dr. Marcelo Almeida, and Laura Solis, Iowa State University, discuss findings from a study identifying key causes of sow mortality, highlight seasonal trends, and share what producers should monitor to reduce losses and improve herd health.

Background

Sow mortality remains a persistent challenge in commercial swine production, with losses linked to health, management, and environmental factors. While progress has been made in reducing prolapses and lameness, many deaths still fall under the “sudden death” category, where the cause remains unknown. Understanding why sows die unexpectedly is critical for improving herd health, identifying preventable issues, and refining on-farm management practices.

Study Overview

A year-long study was conducted on two commercial sow farms in the Midwest to investigate causes of sudden sow deaths through systematic necropsies. Over 230 necropsies were performed to identify trends and determine how diagnostic investigations can guide management decisions. Each sow was examined for visible lesions, and when the cause of death was unclear, tissues were submitted to a diagnostic laboratory for histopathology. The team also compared findings with farm records to evaluate links between parity, timing, and seasonality.

Key Findings

Most deaths occurred around farrowing, particularly during the first week postpartum. The leading cause was retained piglets, accounting for roughly 35 – 40% of all deaths. In some cases, sows were found with one to several piglets remaining in the uterus, sometimes up to 19, indicating that farrowing management practices and oxytocin administration could contribute to these losses. Retained piglets were more frequent in older sows, suggesting potential uterine fatigue or structural changes with age.

Other common causes included gastric disorders such as acute and perforated stomach ulcers, cardiovascular failure, and splenic or intestinal issues. Across all cases, 81% of necropsied sows showed some degree of stomach ulceration, often as a secondary finding. These results suggest that stress, feed disruption, and other environmental factors may contribute to digestive and systemic complications.

Seasonal trends also emerged. Retained piglets were more common during colder months, while gastric disorders peaked in summer, particularly from July through September. Younger sows, including gilts and parity one females, were more prone to gastric ulcers during acclimation, likely due to stress and changes in feed intake after arrival. Cardiovascular failures were more common during warmer months and were often confirmed through laboratory analysis.

Practical Guidance and Takeaways for Producers

This research highlights the importance of necropsies in uncovering hidden causes of sow mortality and guiding management decisions. Routine postmortem examinations, supported by diagnostic labs, can provide valuable insights for identifying trends and improving sow care. Farms are encouraged to work with veterinarians to develop necropsy protocols, train staff to recognize key lesions, and collect tissue samples when the cause of death is uncertain. Sow mortality is often multifactorial, and attention to farrowing management, proper oxytocin use, feed consistency, and heat stress mitigation can help reduce preventable deaths. By making necropsies a routine part of herd health monitoring, producers can transform losses into actionable knowledge, improving sow welfare and overall herd performance.

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