
305 Awardee Talk: Transferring a culture of biosecurity to the feedmill. Jason C. Woodworth¹, Jordan T. Gebhardt¹, Cassandra K. Jones¹, Chad B. Paulk¹, S S. Dritz², Mike D. Tokach¹, Robert D. Goodband¹, Joel M. DeRouchey¹, ¹*Kansas State University*, ²*PIC, North America, Hendersonville, TN*

A culture of on-farm biosecurity has been established and practiced by modern swine production systems for many years. The value of this has been repeatedly demonstrated through improved animal health and performance based on the prevention of disease introduction to the herd. With the introduction of Porcine Epidemic Diarrhea Virus (PEDV) to the US swine industry in 2013, we have learned that feed and feed ingredients can be vectors of disease transmission. Therefore, there is a heightened need to transfer our on-farm biosecurity culture to our feedmills and entire feed supply chain as a way to help prevent disease introduction into swine farms. Feedmills are designed to efficiently and effectively blend feed components into a homogenous batch, and the potential to distribute contaminated feed to multiple farms is significant. While feed and ingredients can be vectors of disease and pathogen transmission, our data continues to show that people are a major risk for pathogen transmission throughout the feed supply chain. Key biosecurity principles such as exclusion, prevention, isolation, mitigation, disinfection, and containment should be adopted and enforced for a strong feedmill biosecurity program. A written feedmill biosecurity plan should be developed and a training program that covers all employees as well as visitors and delivery drivers should be implemented. Continuous risk assessment and environmental monitoring should be utilized to identify new areas of risk and to assess the current status. Unfortunately, feedmills are nearly impossible to completely disinfect and therefore every effort should be made to prevent the introduction of pathogens into the mill. Research that we have conducted with PEDV and African Swine Fever Virus has demonstrated that adopting a culture of biosecurity at the feedmill will reduce risk of disease and pathogen exposure on farms.

Keywords: Feedmill, biosecurity, animal health

306 Economic perspectives on biosecurity decision-making. Lee Schulz¹, Glynn Tonsor², ¹*Iowa State University*, ²*Kansas State University*

African swine fever and many other livestock diseases present a host of challenges with a myriad of private and public good considerations. Chief among these challenges is identifying what drives livestock producer, self-protecting biosecurity efforts. Biosecurity adoption is an example of a private behavior that generates positive spillovers affecting the supply of a public good, that is, disease prevention. Encouraging producers to undertake specific biosecurity practices has proven useful in containing previous outbreaks of livestock disease in the United States, such as porcine epidemic diarrhea virus. Motivating producers to change production and management practices when a disease is not currently present in the United States can be much more difficult because of the (perceived or actual) lower probability of risk. National surveys of livestock producers were conducted to gain insight into decisions regarding ongoing and prospective biosecurity investment. Findings suggest producer and operation characteristics and diverse views on expected frequency of disease outbreaks, anticipated disease duration, and possible financial impact on operations underlie current and likely future biosecurity adoption. Furthermore, results point to both policy (e.g., indemnity provisions and cost sharing strategies) and market signals (e.g. market access and/or premiums paid or discounts incurred) from upstream livestock buyers have potential to incentivize biosecurity efforts.

Keywords: biosecurity, producer expectations, policy design