SURVEY OF SALMONELLA SPP. WITHIN A SWINE PRODUCTION COMPANY TRANSITIONING TO ANTIBIOTIC FREE

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Introduction
As farms remove antibiotics from grow finish diets increases in Salmonella prevalence have resulted. Identification of Salmonella spp. early on can minimize future disease. The objective of this study is to determine the prevalence of Salmonella spp. in a swine production system through cross-sectional surveillance of wean-to-finish sites.

Materials and methods
The 24 wean-to-finish sites sampled pigs ages 10, 15, and 20 weeks for surveillance. Per site, 20 random pig serum samples were collected and tested by ELISA for Salmonella exposure. Per barn, 6 pens were tested using an EnviroBootieTM pair, which were individually sent for Salmonella culture. Twelve necropsies on pigs 6-9 weeks of age exhibiting clinical signs were submitted. Samples were sent to ISU-VDL and BI Health Management Center (Ames, IA).

Results
Antibodies to Salmonella were detected in 67.6% of the pigs sampled. The highest prevalence of Salmonella antibodies was in the 20-week age group with 91% positive. Pigs at 10 and 15 weeks of age had Salmonella positive samples 44% and 70% of the time, respectively. EnviroBootieTM Salmonella cultures returned 6.2% positive of the pigs sampled. Culture positive prevalence was highest in the 15-week age group with 9% positive. Tissue diagnostics for Salmonella spp. identified clinical salmonellosis in 1 of the 12 pigs submitted.

Conclusion
The variation in prevalence among set age groups in the initial surveillance concluded that secondary testing was essential. Salmonella spp. diagnostics revealed 1 pig with clinical salmonellosis, but high percentage of exposure in the herd. This raises a large concern within a swine production company as it questions routine hygiene, biosecurity, management practices and subclinical disease. Vaccination may reduce overall disease status within the herd, however, it is important to have all-inclusive management and biosecurity protocols in place to minimize risk and help in overall reduction of exposure.