Title: Salmonella serovar distribution and persistence in finisher sites – NPB #12-069

Investigator: Julie Funk, DVM, MS, PhD

Institution: Michigan State University

Date Submitted: 4/28/2014

Scientific Abstract:

The objective of this study was to describe the Salmonella serovar distribution on swine farms, compare persistence of different serovars in finishing swine and to identify management factors associated with Salmonella serovar persistence in swine. A study was carried out in one swine production system representing 900 pigs from 18 cohorts of finishing swine. The six most common serovars isolated from this farm were S. enterica serovar Derby (47.3%), S. Agona (27.4%), S. Johannesburg (10.5%), S. Schwarzengrund (2.7%), S. Litchfield (2.5%) and S. Mbandaka (2.2%). Pigs detected Salmonella positive for the first time at 10 weeks of age had a longer duration of shedding, than pigs first detected positive at an older age. The duration of shedding was shorter among pigs infected with S. Derby, S. Johannesburg and other serovars as compared to pigs infected with S. Agona. A significant difference was observed among sites despite belonging to the same production company. Cohorts with pig treatment proportions greater than the mean were more likely to have a shorter duration of Salmonella shedding. There was a significant influence of nursery status on duration of fecal shedding. Pigs from cohorts with nursery positive pools greater than the overall mean had a longer duration of Salmonella shedding as compared to pigs from cohorts with nursery pools less than or equal to the mean.