

## CAHFSE Status Report June 1, 2006

### What have we seen in the CAHFSE data so far?

Quarterly reports on the food safety objectives of CAHFSE from the core data collection period have been posted to the Web site. In addition, summaries from each of the first 2 years of data collection have been posted to the Web site. Briefly, the following were observed:

- The prevalence of *Salmonella* in swine herds was relatively low compared to the other bacterial species monitored.
- *Salmonella* of 22 different serotypes were recovered over the study period; however, *Salmonella* Derby and *Salmonella* Typhimurium 5- isolates accounted for 60.3 percent of the isolates during the period from July 2003 through June 2005.
- The antimicrobial resistance patterns of *Salmonella* isolates observed by quarter were strongly dependent upon the predominant serotype present at the time.
- Most (91.3 percent) of the *Salmonella* isolates from July 2003 through June 2005 were resistant to Tetracycline.
- The prevalence of *Campylobacter* in swine herds declined over the course of the study period.

Summarization of data collected for the animal health objectives of CAHFSE are underway. Briefly, the following were observed:

- Pigs in most herds are exposed to *Lawsonia intracellularis* at some point prior to harvest.
- Timing of the exposure seems to vary across herds.
- Clinical expression of disease associated with *Lawsonia* exposure seems to vary by herd and may be dependent upon antimicrobial usage.
- Exposure to Porcine Reproductive and Respiratory Syndrome (PRRS) virus varies widely among groups of pigs ranging from 0 to 100 percent of samples positive with a median value of 79 percent.
- Very few herds remained PRRS exposure negative over the course of the study.
- Most sites positive for PRRS have high within-group prevalence for PRRS antibodies.

### What's new with CAHFSE?

The CAHFSE program is completing Phase 1 of the project. During Phase 1 the collaborators implemented on-farm data collection in 54 swine herds in 5 States. Producers initially committed to a 2-year data collection effort in their operations. Based upon the staggered start-up for the program there has been a similar staggered endpoint for producer participation. Data and sample collection for Phase 1 will end in June 2006.

In addition, during Phase 1 of CAHFSE a pilot study was conducted to look at the logistics of implementing the in-plant sampling component that was envisioned to be a part of CAHFSE.

The strategic plan for CAHFSE called for an initial data-collection effort on a large number of operations and a pilot study in harvest facilities, followed by a short refinement and revision phase (Phase 2) and then a subsequent implementation of the revised version of CAHFSE (Phase 3).

While we are completing Phase 1 we are already beginning Phase 2. During Phase 2 we anticipate the continued production of summary data from the Phase 1 effort along with concurrent evaluation and redesign of the CAHFSE program. During Phase 2 we anticipate continuing to post information products to the Web site and to share these in various public forums.

We expect Phase 3 of CAHFSE to commence in spring/summer 2007.

During the course of the study some challenges have been encountered:

- The collection of accurate antimicrobial use data on farms requires substantial effort due to the varied ways in which antimicrobials are used (parenteral treatment, in-feed or in-water treatment, growth promotion, disease prevention) and differences in record-keeping systems on farms.
- Scheduling visits to farms specifically when pigs are nearly ready for harvest can be difficult.

#### **What is the status of plans for the future?**

As indicated above the CAHFSE program is expected to continue data collection in 2007 and beyond. Phase 3 of data collection will take advantage of the analysis and evaluation of the Phase 1 data in order to assure data quality and efficiency. Furthermore, tentative plans include:

- Evaluation of methods to select future CAHFSE participants from among the pool of producers that participate in the NAHMS national studies;
- Attempts to harmonize data- and sample-collection methods with a similar project being conducted in Canada.
- Planned expansion of CAHFSE into other commodity areas, including poultry.