Morrison Swine Health Monitoring Project
Incidence Year 2017/2018 Annual Summary
Cesar A Corzo

The 2017/2018 MSHMP incidence year has been productive. Thanks to the Swine Health Information Center (SHIC) funding and participating production companies we have been able to continue to bring value to the industry. We would like to provide an update on our 4 objectives:

Objective 1 – Disease incidence and monitoring
PRRS – Unfortunately 31% of the herds in the project broke with PRRS making it the third highest incidence in the MSHMP history. The epidemic initiated at the same time of the year following previous years' pattern. As with previous years, we continue to see viral introduction into 1) status 4 breeding herds in low dense regions and 2) filtered sow herds reminding us that there continues to be unanswered questions from a transmission standpoint.

PEDv – The year ended at 8% (1% increase compared to the previous year) with a series of outbreaks occurring in 12 farms that had never been exposed to PEDv.

PDCoV – Even though we have not been including a graph we continue to monitor for this virus. There has been minimal activity.

SVV – Incidence of this virus remained low and did not follow the seasonal pattern seen in the previous 2 years.

Atypical CNS Cases – These viruses continue to be found in specific cases with no apparent trend.

Objective 2 – Prospective monitoring of PRRSv
PRRSv sequences continue to be collected building a library for MSHMP participant use. We have used this approach a few times while outbreak investigations have been conducted. We are currently conducting monitoring in a three-company based region detecting newly emerged viruses. On the other hand, the database is being analyzed in a way that provides epidemiological sense. We will report more on this in an upcoming report.

Objective 3 – Develop capacity to capture and analyze movement data
We have been able to generate a process to record movement data (i.e. starting and ending location, speed, trip duration) together with a visualization package in Google Earth. Although we have proved the concept we have faced technology challenges during the development phase and we are currently revisiting our approach.

Objective 4 – To expand participation of producers to allow all to be involved
Expansion continues with existing participants adding more farms. There have been other production systems that have either signed the enrollment forms and are in the process of submitting their data or other production companies that have verbally agreed to join.

MSHMP Database
The database upgrade process continues to move forward from and excel based database to a Structured Query Language (SQL) database providing increased storage capacity, faster and easier queries. This process is key as we look forward to including growing pig sites into the project. On the other hand, a web App is being fine-tuned in order to make data entry an easier, less time-consuming procedure.

MSHMP Report in R
The platform for the weekly report will be upgraded by automating the report creating process in a statistical software known as R.

We would like to thank you once again for your commitment and constant feedback.

Cesar A Corzo
612-720-0497
corzo@umn.edu