

Senecavirus A in processing fluids during an outbreak of SVA – a call for study participation!

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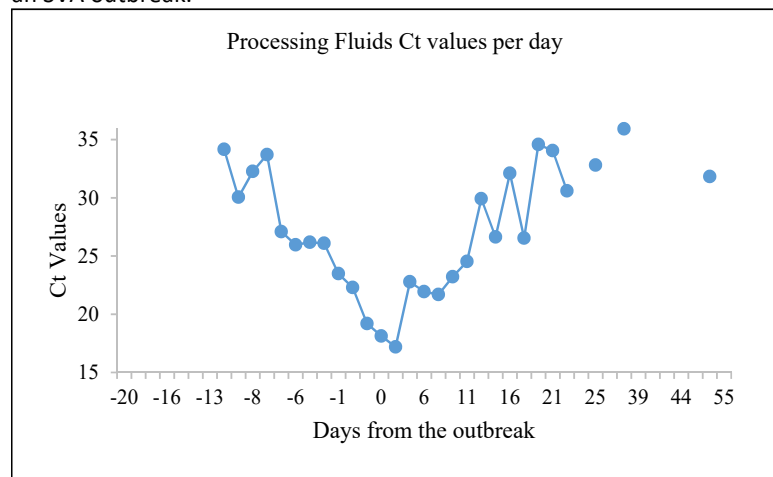
Senecavirus A (SVA) continues to affect the U.S. swine industry through sporadic outbreaks. Besides the impact on herd performance, this vesicular disease has been causing record-breaking number of USDA foreign animal disease (FAD) investigations. Impressively, out of the 2,072 FAD investigations performed in multiple animal species during 2018, 1,592 were due to swine vesicular diseases—predominantly SVA. Without a doubt, this coronavirus has created innumerable headaches and confusion in multiple sectors of the industry. Fortunately, other market-disrupting vesicular diseases such as foot-and-mouth disease have not yet been detected.

The University of Minnesota Swine Group has been working on the understanding of the population dynamics of this virus. In a previous national seroprevalence study funded by the National Pork Board, we have estimated a 17.5% and 7.4% proportion of positive sow and growing pig herds, respectively¹. These results show that SVA is still present in the U.S. swine herds at lower levels and we still have a higher proportion of susceptible farms that need to be protected. Considering the pattern of reported SVA cases in the weekly MSHMP report, it seems unlikely that this disease will stop generating problems before control and elimination actions are initiated at a larger scale. For this reason, more data and an improved knowledge on SVA epidemiology are necessary.

Recently, preliminary data from an SVA outbreak investigation in a sow herd revealed that SVA RNA was consistently detected in processing fluids 13 days before and 30 days after the outbreak, with the last positive PCR result 54 days after the outbreak (Figure 1). Furthermore, piglet mortality reached up to 32.6% and 35.7% in the first two weeks. However, more data is needed to better characterize viral dynamics and shedding cessation in the breeding herds. Therefore, our aim is to improve the understanding of the within-herd epidemiology of this virus by estimating the average time for processing fluid negativity after an outbreak, and describe the production losses in different farms.

We are currently seeking breeding farms for a new AASV-funded research project. Specifically, we are seeking sow farms that have recently had an SVA break to be monitored through processing fluids. There is funding available to cover PCR testing and sample shipping costs. If interested, please contact Drs. Guilherme Preis at milan060@umn.edu or Cesar Corzo at corzo@umn.edu to talk about enrolling your herd in this study! Our partnership with you is at our foremost interest, and research confidentiality is guaranteed.

Figure 1. Processing fluids Ct values per day before and after the onset of an SVA outbreak.



Reference:

1- *National Senecavirus A seroprevalence and risk factors*. G. Preis, J. Sanhueza, C. Corzo. Poster presentation at the 51st Annual Meeting of the American Association of Swine Veterinarians, 2020.