

SHIC Notes New Outbreak of SVA in Brazil

In August 2015, a new, national outbreak of Seneca Valley A (SVA) began in the US, just one month after the Swine Health Information Center (SHIC) started operations. Looking back, we discovered Brazil had gone through an SVA outbreak during the late fall and winter of 2014-15 in the US, during their summer season, preceding the US occurrence. Thank you to Dr. Daniel Linhares of Iowa State University for notifying SHIC of this new SVA outbreak in Brazil and to Dr. Gustavo Simao, Agroceres PIC in Brazil, for offering this on-the-ground update of the current situation.

New Seneca Valley Virus A (SVA) outbreak in Brazil

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Summary points

- Brazil is experiencing a new outbreak of SVA in pigs of all ages.
- Most cases initially were in finishing pigs, moving to nurseries and then to farrowing.
- Lesions are usually very severe, such as completely detached hooves, and healing was delayed, sometimes taking more than 10 weeks.
- There are reports of farrowing sites with suckling piglet mortality rates approaching 30 percent.
- RNA samples extracted from the vesicular fluid will be sequenced in an attempt to elucidate the similarities between the current SVA and the virus from the 2014-2015 outbreak.
- However, one open question is whether there is a new mutant SVA circulating in Brazil, with greater pathogenicity, or if this was just a fall in immunity of the Brazilian herd after these three years between the two outbreaks.



In the past two months, some pig slaughterhouses in Brazil, located in the states of São Paulo, Goiás, Paraná, Santa Catarina and Rio Grande do Sul, have had their slaughter schedules temporarily suspended by the government's Official Inspection Service, due to vesicular lesions. According to the current legislation in Brazil, all clinical cases with vesicular lesions, either in farms or slaughterhouses, must be immediately communicated to animal health authorities, because, until proven otherwise, FMD must be primarily considered. The

shutdown of meat packing units and farms lasts three days on average, until negative serological results (ELISA test) are verified for the samples submitted to the National Agriculture and Livestock Laboratory (LANAGRO). In the first few weeks of the investigation, samples were also screened (ELISA test) for vesicular stomatitis (VS) and SVA as a differential diagnosis at LANAGRO. For SVA, all samples were negative, and for VS, there were a few positive cases on some of the initial screening serology, but the diagnosis was not confirmed.



Initially, most of the cases occurred at finishing sites, moving to nurseries and finally, farrowing sites (smallest number of cases). The vesicular lesions were usually very severe, such as completely detached hooves, and healing was delayed, sometimes taking more than 10 weeks. There are reports of farrowing sites with suckling piglet mortality rates approaching 30 percent.



Approximately four weeks after the first reports and with an increasing number of cases all over the country, the Official Animal Health Service was instructed by the Ministry of Agriculture (MAPA) to collect samples of not just serum but also vesicular fluid and affected skin at suspected farms. PCR screening for VS and SVA was initiated, with positive results for SVA and negative for VS. Also, other laboratories (non-official) and universities received samples from the same inspected farms and had the same positive results for SVA. The virus was also found through PCR tests in feed mill supplies such as mixed meat and bone meal, soybean meal and feed for finishing pigs at the farm.

The affected farms are being instructed to immediately block the entry of animals for at least six weeks, and mass exposure of the entire herd using feces of piglets with diarrhea (farrowing sites), and/or oral fluids collected from animals with snout lesions.

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