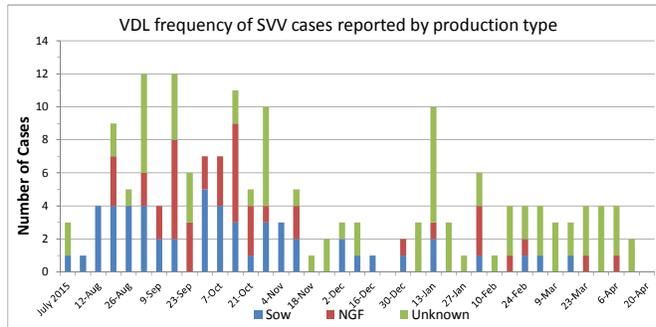
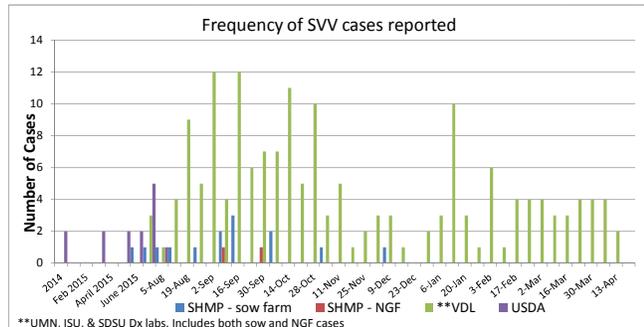


## Seneca Valley Virus Update

We requested SHMP participants and UMN, ISU, and SDSU diagnostic labs to report frequency of Seneca Valley virus cases each week.

- 2 new SVV cases reported for week of 4/13/16
- Note that the reported cases between data sources may overlap.



## Eliminating PEDv from the Environment

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### KeyPoint

- PEDv PCR positive manure holding tank at a farm was heated to 180F for 30 minutes and then tested PCR negative.

### Purpose:

The purpose of this report is to illustrate one way of eliminating PEDv from the environment effectively so that subsequent re-breaks can be avoided.

### History:

In October 2014, I had a client with 200 sows on a batch farrowing system on a research farm that had inadvertently brought PEDv into the onsite gilt isolation facility with a load of replacement gilts. The gilts showed clinical signs post arrival, tested PEDv positive and were removed from the facility. Unfortunately, in this process, the gilts contaminated the pit which drains into a sediment tank and on into the main lagoon.

The downstream lagoon tested PEDv PCR negative over the summer. However the sediment tank near the building and the manure pump-out holding tank continued to test PCR positive. The isolation pit was filling up to the point where the sediment tanks were about to spill over into the lagoon potentially causing the lagoon to revert to PEDv positive.

In the area of the country where this farm is located, they are allowed to spray apply manure out of the lagoon onto the field. However, my client does not want to infect the sow farm which had stayed PEDv naive until this point.

### Methods:

We discussed different options of eliminating PEDv from the pit including:

- Removing all manure from the pit.
- Disinfecting the pit.
- Heating up the pit to 160°F for 10 minutes.

In February 2016, the pits were pumped down with material being knifed into a nearby pasture because they were testing PEDv PCR positive. The tanks were disinfected with a small amount of material in the bottom of each tank. The largest holding tank then tested negative, but the 2 smaller sediment tanks remained positive. The first sediment tank from the building was refilling because there were animals being housed in the facility.

As we talked through the remaining options, it was apparent it was going to be very difficult to get the manure pit completely emptied, washed and disinfected at a high enough concentration to denature the virus, so as not to test PCR positive. The engineers on the team were intrigued by the concept of heating up the pit and felt they could do that with high pressure steam.

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