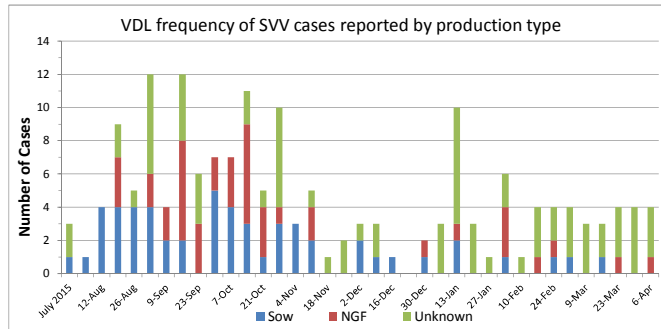
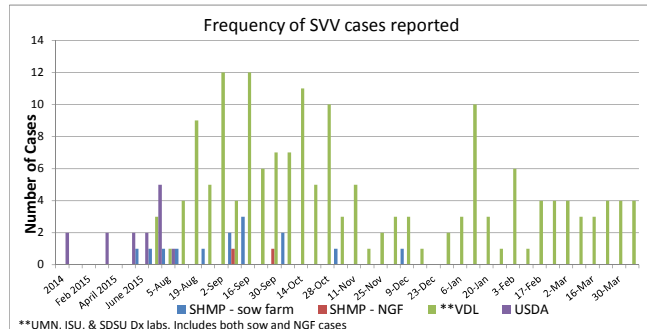


Seneca Valley Virus Update

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

- 4 new SVV cases to report this week
- Note that the reported cases between data sources may overlap.



Investigating an optimal seeder-to-naïve ratio for *Mycoplasma hyopneumoniae* gilt exposure prior to entering the breeding herd

Luiza R. Roos 1, Eduardo Fano 2, Nitipong Homwong 1, Brian Payne 2, Maria Pieters 1
1 University of Minnesota; 2Boehringer Ingelheim VetMedica Inc.

Considering the high replacement rate of breeding herds, and the fact that replacement gilts are usually from *Mycoplasma hyopneumoniae* negative sources, acclimation measures have to be taken into account when introducing these gilts into endemically infected herds. In this study the ideal seeder-to-naïve gilt ratio, or proportion of shedding gilts in a group, was evaluated for successful natural exposure to *M. hyopneumoniae*. Sixty gilts were divided in two groups, 21 2-week old seeder gilts, and 39 aged-matched naïve gilts that were exposed to seeders during a 4-week period. Gilts were divided into six groups of 10 with different proportions of seeder-to-naïve, from 1:9 until 6 seeders and 4 naïve gilts. Naïve gilts were considered positive in the end of exposure if *M. hyopneumoniae* was detected on bronchial swab or fixed lung tissue, collected at necropsy. As result, 33% (3/9) naïve gilts were positive in the 1:9 ratio, 75% (6/8) in 2:8, 28% (2/7) in 3:7, 33% (2/6) in 4:6, 80% (4/5) in 5:5 and 100% (4/4) in the 6:4 ratio (Figure 1). Six seeder gilts, or actively shedding gilts, were required in a group of 10 for successful exposure to *M. hyopneumoniae* in a 4-week period. However, *M. hyopneumoniae* was detected on laryngeal swabs samples of all naïve gilts in the ratio 5:5, implying that this ratio can possibility be used to achieve exposure of all gilts in the group in a longer period of exposure. This investigation is a first step towards a standard *M. hyopneumoniae* acclimation protocol.

Keywords: gilt acclimation, enzootic pneumonia, seeder-to-naïve exposure model.

This work has been published in: Roos L., Fano, E., Homwong, N., Payne, B., Pieters, M. 2016. A model to investigate the optimal seeder-to-naïve ratio for successful natural *Mycoplasma hyopneumoniae* gilt exposure prior to entering the breeding herd, Vet Microbiol. 184, 51 – 58 (doi:10.1016/j.vetmic.2016.01.008)

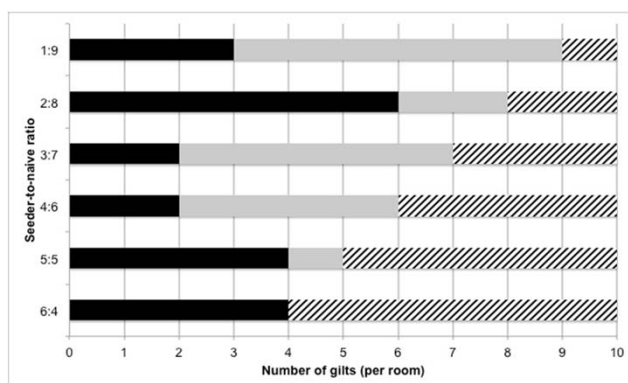


Figure 1: Number of *M. hyopneumoniae* positive and negative naïve gilts per seeder-to-naïve ratio (six ratios). Solid black boxes represent positive naïve gilts, solid grey boxes represent negative naïve gilts, and striped boxes represent seeder gilts. (Roos et al., 2016)