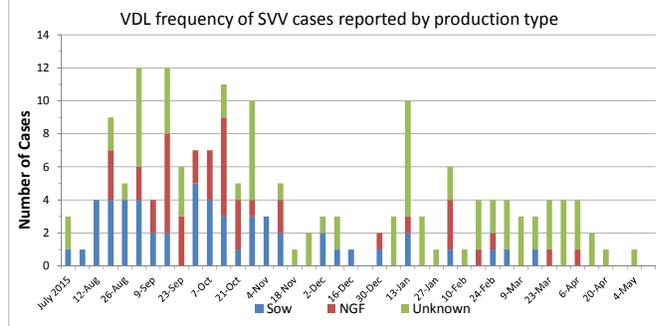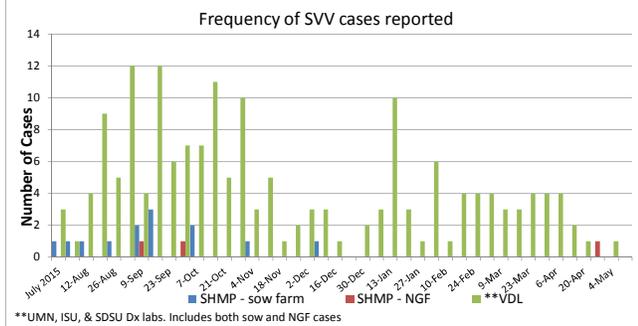# Seneca Valley Virus Update

We requested SHMP participants and UMN, ISU, and SDSU diagnostic labs to report frequency of Seneca Valley virus cases each week.
- 1 new SVV case to report from week of 5/4/2016
- Note that the reported cases between data sources may overlap

Frequency of SVV cases reported

**UMN, ISU, & SDSU Dx labs. Includes both sow and NGF cases

VDL frequency of SVV cases reported by production type

Characterizing Piglet Loss from PRRS Outbreak

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Keypoints:
- Across a sample of 24 farms, reduced number of litters farrowed, decreased live born and increased pre wean mortality accounted for approximately the same % reduction in pigs weaned during the outbreak.
- The relative contribution of each factor varied among farms.
- The cause of this variation is unknown and might be due to PRRS virus virulence, immune status of the herd, exposure program used and others.

Introduction

The main implication of PRRS virus infection in a sow herd is a decrease in pigs weaned. This decrease can come from one of three sources prior to weaning: a decrease in litters farrowed (i.e. decreased conception rates, increased sow death, and increased resorptions / abortions), a decrease in live born per litter (i.e. decreased ovulation, increased resorption, increased stillborn and mummified fetuses) and an increase in pre wean mortality. This study had the objective of quantifying the percent attribution of each factor to overall decrease in pigs weaned.

Methods
- 24 farms were selected as a convenience sample of herds enrolled in SHMP.
- Showed clinical signs and reported to SHMP as a new break.
- Recovered to baseline between 2013 and 2016 according to the Linhares et al (2015).
- Use data from cohort farrowing report or equivalent to calculate average sows farrowed, live born per litter, and average of pre-wean mortality for 21 weeks prior to break.
- Determine decrease in wean pigs due to loss in litters, in live born and in pre wean mortality per week during the outbreak.
- Sum loss and determine percent attributed to each. Note: if one factor outperformed the average prior to the break, it was characterized as not contributing to overall loss.

Results

Average attribution of total loss across all farms was: 38% from reduced litters farrowed, 24% from decreased live born and 38% from increased pre wean mortality. While the percent attribution of each type of loss is approximately equally distributed, individual farms do not exhibit this. Many farms' loss was dominated by one or two factors rather than split evenly (Figure 1).
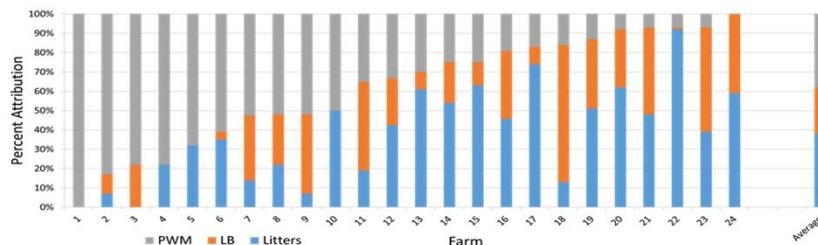

Figure 1.

References
1) Linhares DCL. Comparison of time to PRRSv-stability and productive losses between two exposure programs to control PRRSv in sow herds. PVM. 2014; 116:111-119