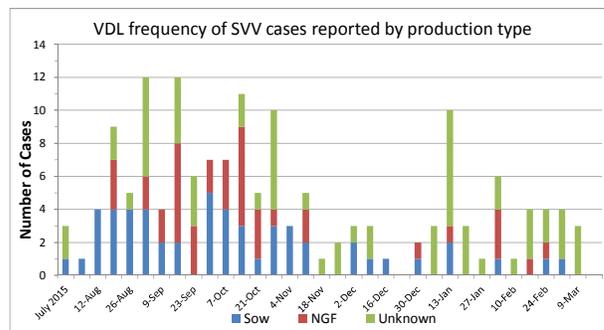
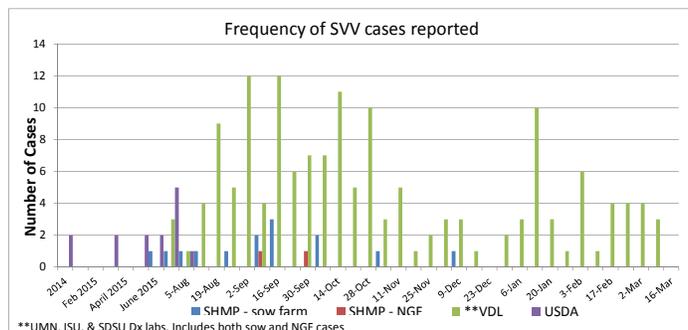


## Seneca Valley Virus Update

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

- No new SVV cases to report this week
- Note that the reported cases between data sources may overlap



Dr. Andreia Arruda joined our SHMP research team last month and is already making a major contribution. The next 5 Science Page series will summarize her PhD thesis. Andreia was advised by Dr. Zvonimir Poljak at Ontario Veterinary College, University of Guelph and worked with the PRRS regional control and elimination projects in Ontario, Canada. Welcome Andreia! Bob Morrison (BobM@UMN.Edu).

### Part 1 – Descriptive analysis of PRRS for 3 control areas in the province of Ontario, Canada

#### Key Points

- High participation rates in the PRRS control program were reached for 2/3 regions
- The majority of facilities in some regions do not have shower-in facilities.

The objective of this research was to describe demographic and biosecurity data collected from 3 regional control and elimination projects located in the province of Ontario. The regions of interest corresponded to Niagara, Watford and Perth (Figure 1). The Niagara and Watford regions had 75 and 72 participants, respectively, and participation rates for these regions were estimated at 95%. For the other region, Perth, there were 223 participants and participation rate was estimated at 50%.

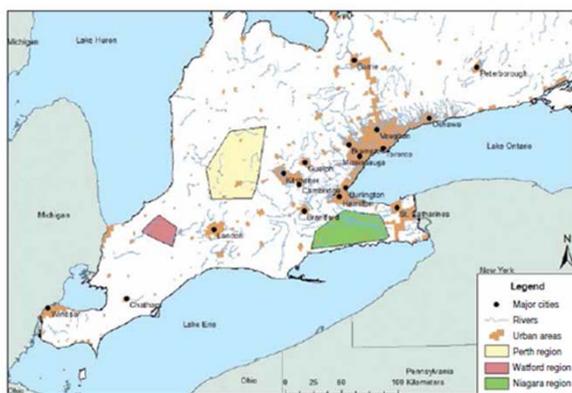


Figure 1. Map of southern Ontario showing the 3 regions participating in PRRS ARC&E projects  
Source: Can J Vet Res 2015; 79: 268-278

From the three regions, the highest **swine-dense** area was Perth estimated at 536 pigs/ mi<sup>2</sup>. As a comparison, Duplin County in North Carolina, one of the most dense counties in United States, has approximately 2,686 pigs/ mi<sup>2</sup>.

The mean distance to the closest neighbor varied from 1.0 to 1.4 miles, and was fairly similar for PRRS positive and negative sites. In the US, it was estimated that 47.7% of sites are located less than 1 mile from the nearest swine site (NAHMS, 2012).

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For all regions, the most prominent **production type** was finishers. Farrow-to-wean sites corresponded to 16% (Perth), 7% (Watford) and 5% (Niagara) of all sites. In the US NAHMS survey (2012), this proportion was similarly estimated at 7.5% and varied from 5-15% depending on herd size.

Mean number of pigs per site varied: 1,179 for Watford, 1,222 for Perth and 1,370 for Niagara. Considering an US pig inventory estimated at 67.8 million head and the presence of 75,442 operations (NAHMS, 2012), the mean number of animals would be 989 pigs per operation.

**Biosecurity** information was available for two of the regions. In Watford, 76% of sow sites had a shower-in facility but within the Perth region only 44% of the sow sites did. For sites that did not report having a shower facility, 75% reported having a Danish entry. According to US estimates (NAHMS, 2012a), the use of biosecurity practices varied according to purpose. For business visitors, 26% of sites reported requiring shower before entry, and 3.5% of all sites reported having a **Danish entry**. For non-business visitors, shower was required for 13% and a Danish entry was in use for 2% of sites. For employees, both estimated were higher (29% and 6% for shower and Danish entry, respectively).

None of the swine sites enrolled in Ontario regional control projects were filtered. The proportion of sow herds enrolled in the Swine Health Monitoring Project that are completely or partially filtered is estimated at 17% (considering only sites that had information available, n = 541)

Approximately 31% (Watford region) and 8% (Perth region) of swine sites reported using continuous flow, and 35% (for both Watford and Perth) AIAO by room. US estimates are that approximately 28% of farrowing facilities, 9% of nursery facilities, and 11% of grower pig facilities had a continuous flow of pigs, and 47% of farrowing facilities, 34% of nursery facilities, and 13% of grower pig facilities managed using a AIAO by room approach (NAHMS, 2012a).

Approximately 75% of swine sites participating in both regions' projects reported using an **external truck** at some level for their site. In the US, 60% of the sites reported allowing trucks from commercial livestock transporters or animal haulers to enter the swine site area (NAHMS, 2012).

#### References

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