

## Prevalence of PRRSv decreases over time in herds undergoing LCE

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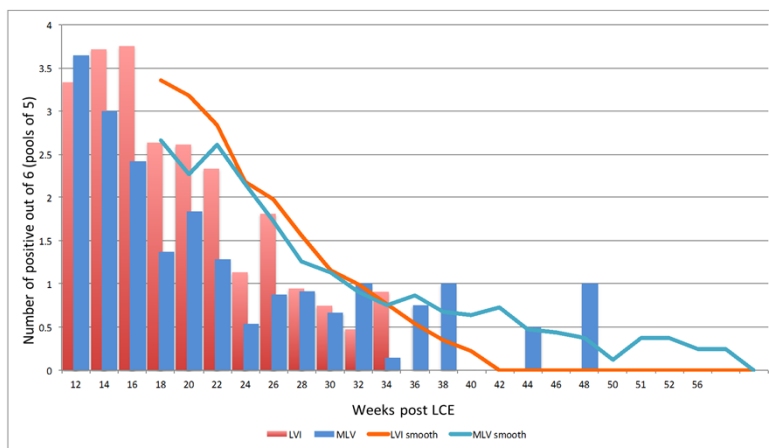
### Key Points:

- Prevalence of PCR positive pools decreases over time as closure time proceeds.
- Low prevalence persists for longer time in herds treated with MLV for whole herd exposure as opposed to FVI.
- PRRSv may be circulating at low prevalence and relaxing biosecurity practices may allow virus to persist longer in the herd.

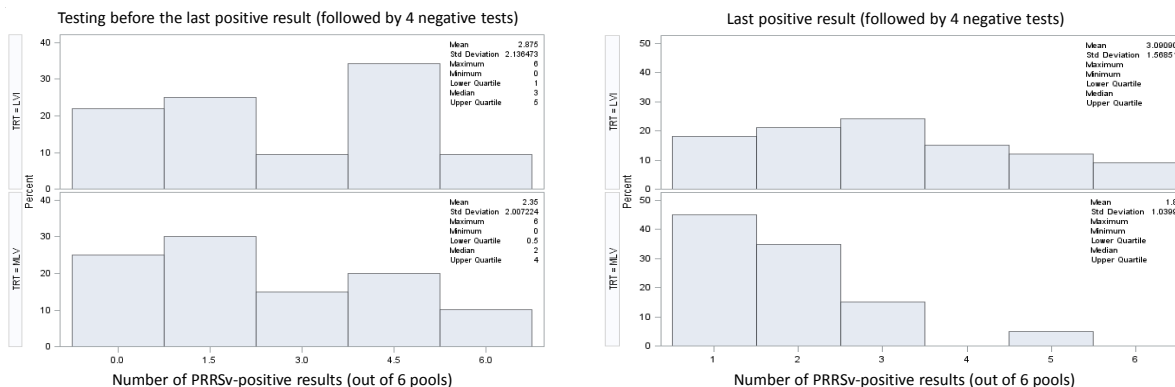
In our previous study of 61 sow herds, it took 26 weeks (range 12-42 wks) to achieve stability as defined by 4 consecutive samples of at least 30 weaned pigs.\* The purpose of this follow-up study was to describe the prevalence of PRRSv during the closure period and compare that observed in herds treated with modified-live PRRS virus vaccine or field virus inoculation (FVI) for whole herd exposure. Prevalence was measured as proportion of 6 pools of serum that were PCR positive.

PRRSv prevalence decreased over time and fluctuated near the limit of detection towards the end of LCE. The rate of decrease in prevalence until 34 weeks of the closure period was similar between MLV and FVI treated sow herds. However, after 34 weeks, MLV treated herds had a longer period of low prevalence (figure 1,2). Also, herds exposed with MLV had significantly lower prevalence on the last positive test before testing stable (table 1).

Veterinarians should expect a longer period of low prevalence if MLV was used for whole herd exposure vs FVI. Staff needs to maintain biosecurity measures to eliminate field virus.



**Figure 1.** Prevalence of PCR-positive results (x/6) over time, by treatment during LCE (LVI or MLV). The smooth lines represent 4 months moving average.



**Figure 2.** Frequency of PRRSv-positive PCR results

**Table 1.** Number of PCR-positive results on the last positive testing\*.

| Treatment | 1/6 positive | 2 or 3/6 positive | ≥ 4/6 positive |
|-----------|--------------|-------------------|----------------|
| LVI       | 6 (18%)      | 15 (45%)          | 12 (36%)       |
| MLV       | 9 (45%)      | 10 (50%)          | 1 (5%)         |

\* X<sup>2</sup> p-value, 0.0123.

\* <http://dx.doi.org/10.1016/j.prevetmed.2014.05.010>