

PRRS incidence in status 4 sow farms

J.M. Sanhueza, E. Geary, C. Vilalta, C. Corzo

Key Points

- In the last 9 years, on average 10.2% (Range 3.7% – 22%) of status 4 farms have had a PRRS outbreak during the MSHMP season and in the 2017-2018 season, the cumulative incidence (July to April) is 9.6%.
- The lowest PRRS incidence was observed during the 2013/2014 PRRS season; the year that PED entered the US.
- PRRS incidence in status 4 farms during the current MSHMP season is not higher than the ones observed in the previous MSHMP seasons.

We received a concern of some participants suggesting that this MSHMP year there has been an increase of status 4 sow farms breaking. Here we describe PRRS incidence in status 4 farms from 2009 to April 2018 and compare with the current MSHMP year using Fisher's Exact test. In each MSHMP year, data was limited from July to April to make it comparable to the current MSHMP season.

During the current MSHMP year (July 2017-April 2018), 27 status 4 farms have had a PRRS outbreak. The average incidence of status 4 farms from 2009 to April 2018 was 9.6%. However, PRRS incidence have varied greatly among years. The highest PRRS incidence was observed during the 2011/2012 MSHMP season with a 19.6%, whereas PRRS incidence had its minimum value during the 2013/2014 MSHMP season with a 3.4%. The latter coincides with the year that porcine epidemic diarrhea virus (PEDv) entered the US. In PEDv pre-epidemic years (July 2009-July 2012) the average PRRS incidence was 16.1%, while in post PEDv epidemic years (July 2014-July 2017) the average PRRS incidence was 8.8%.

The percentage of farms that broke from status 4 between July 2017 and April 2018 (6.9%, 95% confidence interval (CI) 4.8%-9.9%) was numerically higher than the percentage of farms that broke from status 4 during between July 2016 and April 2017 (5.2%, 95% CI 3.4%-8.0%). Nevertheless, this difference was not statistically significant ($p=0.37$).

When comparing the incidence during the 2017/2018 MSHMP year (6.9%, 95% CI 4.8%-9.9%) with the incidence observed during the 2015/2016 (limited to April 2016) MSHMP year (10.8%, 95% CI 8.1%-14.3%), a borderline significant difference ($p=0.06$) was observed.

In summary, PRRS incidence in status 4 farms (July 2017 –April 2018) was overall similar to previous years, although slightly higher than July 2016-April 2017, and significantly lower than July 2015-April 2016. Other factors, such as region, may be contributing to the perception of increased PRRS incidence in status 4 farms. Exploring these factors may help explain the perception of increased incidence.

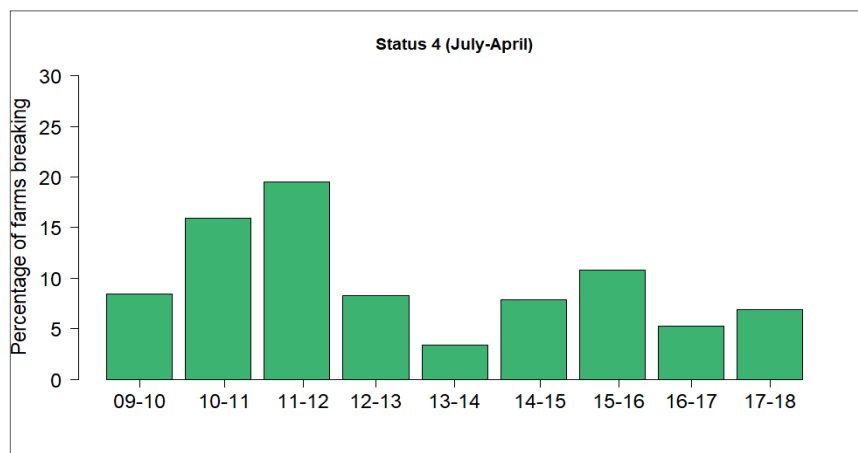


Figure 1: Percentage of PRRS incidence in Status 4 farms by year (July-April)

Find other MSHMP science pages at:
<https://z.umn.edu/SciencePages>