PRRS cumulative incidence by status

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If you have any follow up questions or comments, please don't hesitate to contact Carles Vilalta, Juan Sanhueza or Emily Geary at cvilalta@umn.edu, jsanhuez@umn.edu, or shmp@umn.edu.
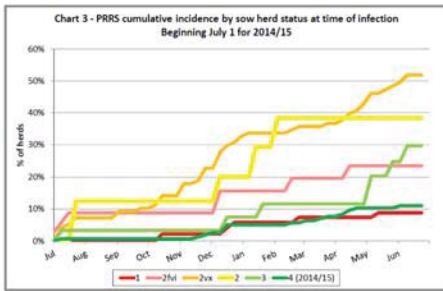
Key points
- Cumulative incidence is higher in those farms that are under status 2, 2vx and 2fvi.
- The incidence is lower in farms that had recently an outbreak or those that are completely negative.
- Different ways of calculating incidence by herd status lead to the same overall conclusion.

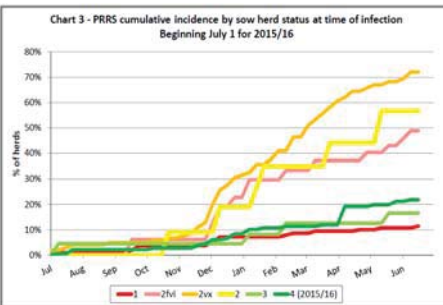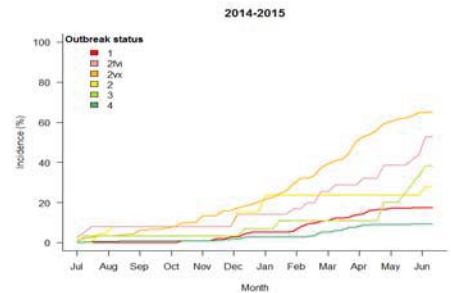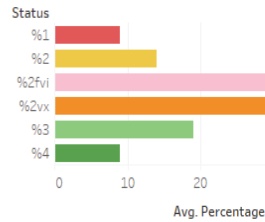
Following another question from a participant we have looked at outbreaks by status from the last three years. We have calculated those percentages following three different approaches:

1) The first approach is the one used in chart 3 in the weekly report. This approach uses the initial number of farms in each status at the beginning of the MSHMP year (July) as a fixed denominator for the whole year. The numerator is the running number of outbreaks. As farms change status over the year, it can lead to more breaks than there were farms in the original denominator. Because of this, the resultant percentage can be over 100%.

2) We also looked at a different approach having a dynamic denominator. In this case the denominator took into account all the farms that went into that status during the year as a population at risk. The numerator was the running number of outbreaks. This value goes between 0% and 100%. These are represented by the bar graphs.

3) In the third approach, we looked at the sum of weekly incidences. The weekly incidence is the number of new cases in a week divided by the number of farms at risk in that same week. Individual weekly incidences were added over time. Although each weekly incidence can have a value between 0% and 100%, the sum of incidences can add to more than 100%.
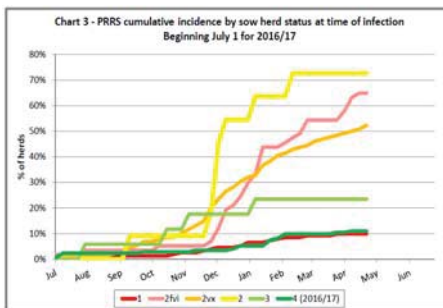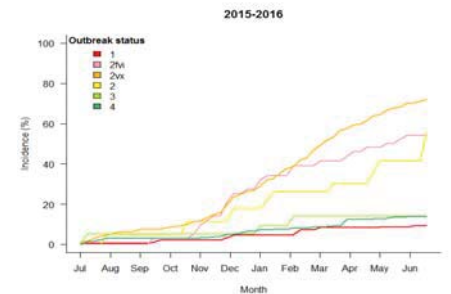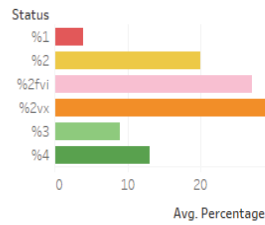
We observed that by looking at the same data in different ways we are still able to infer that farms under status 2, 2fvi or 2vx are the farms at higher risk of breaking with PRRS.