

## Association between the time between PRRSv infections and herd PRRSv status

### Key point:

- Herds with PRRS status 3 and 4 had the longest interval between consecutive outbreaks.
- Herds with PRRS status 2 had disappointingly frequent outbreaks..

Of the 741 herds in the SHMP project that share PRRS status, 189 had recorded at least two PRRS breaks. We extracted dates of infection, PRRS status at the infection, filtration status of the herd, inventory, and county density. We described the time between breaks and analyzed the association between time interval and PRRS status (2vx, 2fvi, 2, 3 and 4) at the 2nd infection.

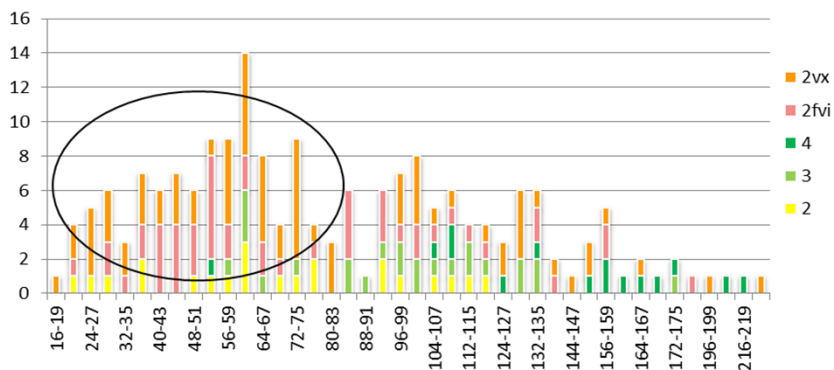
The mean and median interval including all herds was 84.6 and 74 weeks, respectively (Table 1). There was a significant association with PRRS status in that provisionally negative and negative herds (3, 4) had the longest interval..

**Table 1:** Interval (weeks) between consecutive outbreaks

Status	Number	Mean	Median	SD
2fvi	51	74.5 <sup>a</sup>	61	38.1
2vx	77	78.6 <sup>a</sup>	67	44.1
2	22	69.4 <sup>a</sup>	65.5	29.5
3	24	100.3 <sup>b</sup>	100	28.6
4	15	147.3 <sup>b</sup>	158	42.7
	189	84.6	74	43.8

<sup>ab</sup> means with different letters differed at  $p < 0.05$

The shorter interval between breaks for status 2vx and 2fvi was expected and likely reflects a higher risk of infection and therefore, attempts to stimulate herd immunity and lessen the clinical impact. As expected, most of the herds with status 3 and 4 broke later and dominated the concluding half of the time scale (Figure 1). Status 2 herds have a disappointingly short interval which may reflect an under-estimation of their risk of infection.



**Figure 1:** Time (weeks) between consecutive PRRS infections by herd status

Next week, we will discuss the lack of correlation between time interval between 2 PRRS breaks and county density of swine.

Thank you for your participation and ongoing support.

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