

Quarterly review of MSHMP reported PRRSV Restriction Fragment Length Polymorphism (RFLP) patterns

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Keypoints:

- Recording PRRSV RFLP and sequences will provide better insights into the epidemiology of the disease at local, state and national level.
- Building a RFLP database will allow us to assess which factors could be involved or related with the emergence of a new RFLP.
- The predominant pattern RFLP in this quarterly review is the 1-7-4.

At the beginning of this new 2018/19 disease season we asked MSHMP participants to share more information related to each PRRS outbreak such as the sequence and RFLP. In this science page we summarized the information provided.

In the first quarter of the 2018/2019 incidence year, 20 breaks affecting 12 production systems were reported. Out of these, 4 occurred in July, 13 in August and 3 in September. Of those 20 farms, three had a break while still being status 1, one was status 2 in the process of eliminating the disease (not using any immunization protocol at that point), 6 were using field virus as the acclimatization protocol (2fvi), 8 were using vaccine (2vx), one was provisionally negative (status 3) and one broke from a status 4 after being almost 4 years completely negative. The distribution of the breaks is wide and affects different states. Thus, we had 6, 1, 4, 1, 4, 2, 1 and 1 break in the states of IA, IN, MN, MO, NC, NE, OK and PA, respectively. The closest 2 farms that broke were 1.2 miles apart, belonged to the same company and had the break a week from each other (no sequences was provided).

Eight out of the 20 breaks reported were accompanied by the associated RFLP. The predominant (4 out of 8) RFLP pattern since July is 1-7-4. Iowa was the state with the highest number of 1-7-4 cases.

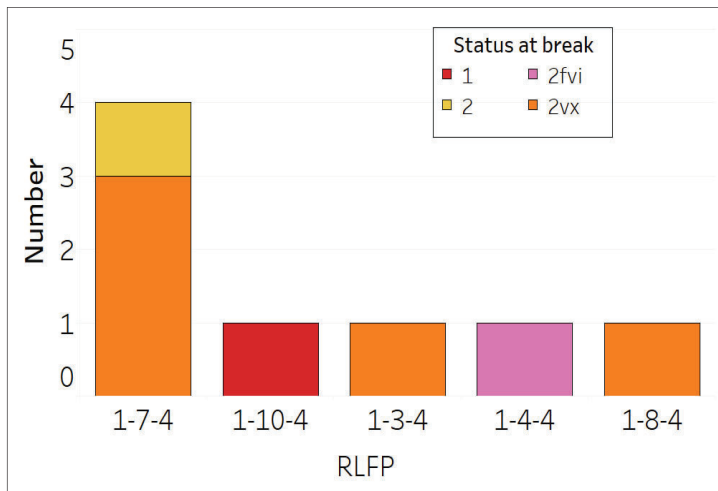
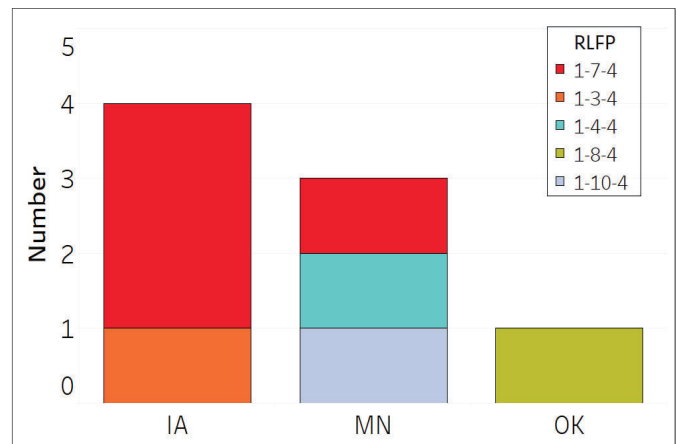


Figure 1 (Above). Number of PRRSV RFLP by pattern reported in MSHMP since July. Colors represent the status at break of the breeding herd.

Figure 2 (Below). Distribution of RFLP patterns by state between July and Sep 2018.



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