

Is the 2020-21 PRRS a different one?

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Key points:

- MSHMP data shows a slight lower PRRS incidence than in previous years
- There has been PRRS outbreaks clustered in time and space in specific regions where the virus has generated important losses
- PRRS prevalence has been at an all-time high, contributing to the general perception of a higher burden of PRRS

The MSHMP team received questions from various sources on the disparity between the project's low reported PRRS incidence and a sense that this year PRRS has been more active than usual. This continued sense of disparity prompted the team to assess if this year's data reporting was markedly different compared to past years, to see if we could benchmark the resulting numbers, and to identify some possible causes for the difference. Because the process has been a useful assessment of the MSHMP data intake and contributing variables, we wanted to share our comments.

Data Intake

MSHMP routinely tracks how many and which systems report each week. Reporting has been consistent throughout the year and is comparable to previous years. There are certainly variations by week and delayed reports of outbreaks, but that is also consistent with past years. We also looked at how many systems were delayed by how many weeks and found that consistently over 70% reported in the current week and over 80% were reporting within a two-week window. The remaining 20% that are 2+ weeks behind in reporting roughly represent 9% of the sows in our database. Systems delayed in reporting vary by week meaning that we can be confident that the data we receive is consistently up to date across systems. Overall, the data being provided to MSHMP by voluntary participating systems is consistent, current, and comparable to previous years.

Contributing Factors

There are some factors that may be contributing to the sense of disparity between the MSHMP PRRS cumulative incidence and the sense that this PRRS season has been a more difficult one compared to previous years.

- 1) Space and time – There have been outbreaks of PRRS clustered in time and space in different regions of the country suggesting a faster rate of spread at the local level but not at the national level. It is also important to mention that MSHMP does receive data from roughly 50% of the U.S. breeding herd; however, this does not include all companies in all regions which lead to a partial representation of disease occurrence at specific local levels.
- 2) Farm type – To date, MSHMP accounts for disease occurrence in breeding herds only. It is our understanding that in certain regions, growing pig farms have unfortunately experienced severe PRRS outbreaks, which contribute to the overall increase in pig farm incidence.
- 3) Virulent strains / Unrelated strains – During the 2020-2021 season, several participants have reported PRRS outbreaks in which losses have surpassed what they have usually seen recently. An example is the virus detected in the fall of 2020 and that our team classified as Lineage 1C (RFLP 1-4-4). Such virus generated important losses and prompted the rapid communication among participants and the industry. At the same time, another two unrelated viruses classified as Lineage 1A (RFLP 1-7-4) and 1C (RFLP 1-4-4) were generating a similar degree of losses but these occurred ~600 to 400 miles away from the first identified outbreak, respectively.
- 4) Outbreaks in historically low incidence regions – PRRS outbreaks were occurring in two regions of the country where incidence has been historically low and where farms had remained PRRS free for long periods of time. These outbreaks certainly surprised both producers and practitioners as more farms continued to break in each of these regions. Viruses identified in these two regions had been historically circulating locally.
- 5) PRRS prevalence this MSHMP year started at an all-time high, with around 30% at the beginning of the season. This, combined with a PRRS incidence similar to last season, means that even though we have on average about the same number of new breaks, more farms are positive at any given point in time. This certainly contributes to the overall perception of a higher burden of PRRS this season compared to the previous one.

Summary

The 2020-2021 PRRS has certainly been a different PRRS year. Although incidence remained consistent, the local transmissions, farm types affected, and a higher initial prevalence than usual marked this differences. Based on the above-mentioned comments, we can confidently affirm that MSHMP participants continue to voluntarily share their disease data similar to past years. Thanks to your willingness and proactive feedback we are having these interesting and valuable conversations.

We welcome any thoughts or feedback on this topic. Any companies interested in participating in MSHMP, please contact Cesar Corzo at corzo@umn.edu or Emily Geary at shmp@umn.edu.