

PRRS 2021-2022 Exponentially Weighted Moving Average (EWMA) by State

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Keypoints:

- We continue to observe different EWMA patterns across states.
- Iowa, Minnesota and North Carolina continue to be the regions with the highest number of cases.
- The impact of the circulation of the new L1C 144 variant in Iowa and Minnesota is shown here with high EWMA peaks, including in spring 2021.

We continue to analyze the MSHMP 2020-2021 PRRS incidence seasons through the summary of outbreaks and EWMA pattern comparison for individual states. We specifically looked at the six states with the largest MSHMP sow herd sizes. These include Minnesota, Iowa, North Carolina, Oklahoma, Nebraska, and Illinois. Both the scale of the EWMA and the number of outbreaks is the same across all charts. The red line is the last calculated threshold of the epidemic curve for the national EWMA during 2020-2021 (0.35%) and is included here as a reference.

Iowa: The 2021-2022 PRRS epidemic season started in October 2021. This epidemic curve was slightly flatter compared to the 2020-2021 winter PRRS epidemic. However, a summertime increase in cases around May to August 2021 was observed, which can be mostly attributed to the newly emerged L1C 144 variant.

North Carolina: The PRRS case increase for the 2021-2022 PRRS season in North Carolina started in January 2022 and is ongoing. A higher EWMA peak in this winter season was observed compared to the same period in 2020-2021.

Minnesota: Although a higher EWMA peak was observed in December 2020/January 2021 than the peaks observed for the current period, EWMA for Minnesota was higher than ever observed during the summer months of May to August 2021, mostly due to the transmission of the new variant. Similar to what observed in Iowa, this current epidemic period started in October 2021.

Oklahoma: PRRS incidence in Oklahoma continues to be low, with no significant peaks during the current period.

Nebraska: Contrary to the previous more atypical season, Nebraska is experiencing a lower but still pronounced epidemic period that started in December 2021 and is ongoing.

Illinois: PRRS EWMA remained below the national epidemic threshold for the remaining of the 2021-2022 season, with the exception of a slight increase in EWMA during spring (July 2021). Overall, the current PRRS season showed a lower EWMA than the previous season.

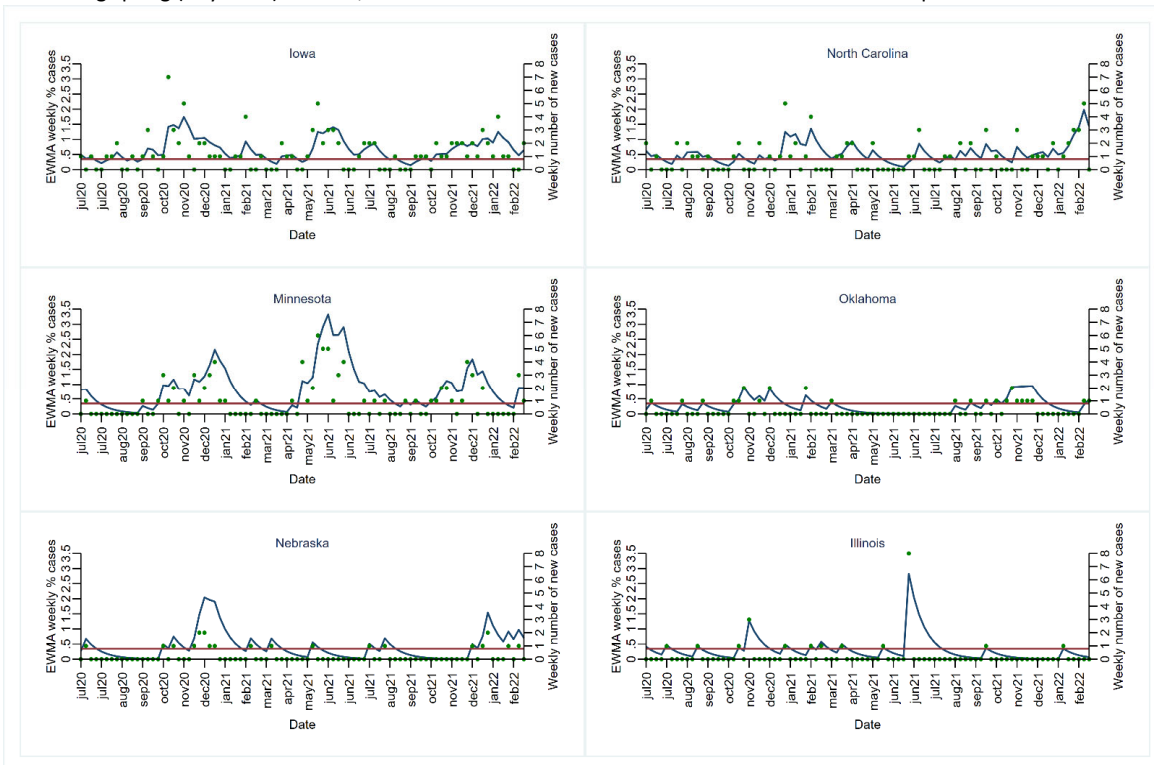


Figure 1: EWMA (blue line) in six states since July 2020. Green dots represent weekly number of PRRS cases and red line the overall epidemic threshold.