



EPIDEMIOLOGY OF THE DANISH PRRS OUTBREAK 2019

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Background and Objectives

PRRSV-1 was detected in samples taken as part of the routine PRRSV surveillance in a PRRSV negative boar station in July 2019, followed by subsequent transmission to herds and reports of reproductive failures and high piglet mortality.

The aim of this study was to document transmission from the boar station and the production losses.

Materials and Methods

The routine surveillance at the boar station consisted of testing for antibodies against PRRSV every second week. Blood samples from the boar station taken prior to the outbreak were tested for PRRSV by RT-qPCR to assess the most likely day of PRRSV introduction. An intensive surveillance program was implemented for 3 weeks in the breeding- and multiplier herds. In the production herds, samples were taken if clinical signs of PRRS appeared.

Production data were collected from 13 of the herds. The average levels of pre-weaning mortality and number of weaned pigs were compared for the five-month period after infection and the preceding seven months before infection with the new variant of PRRSV-1.

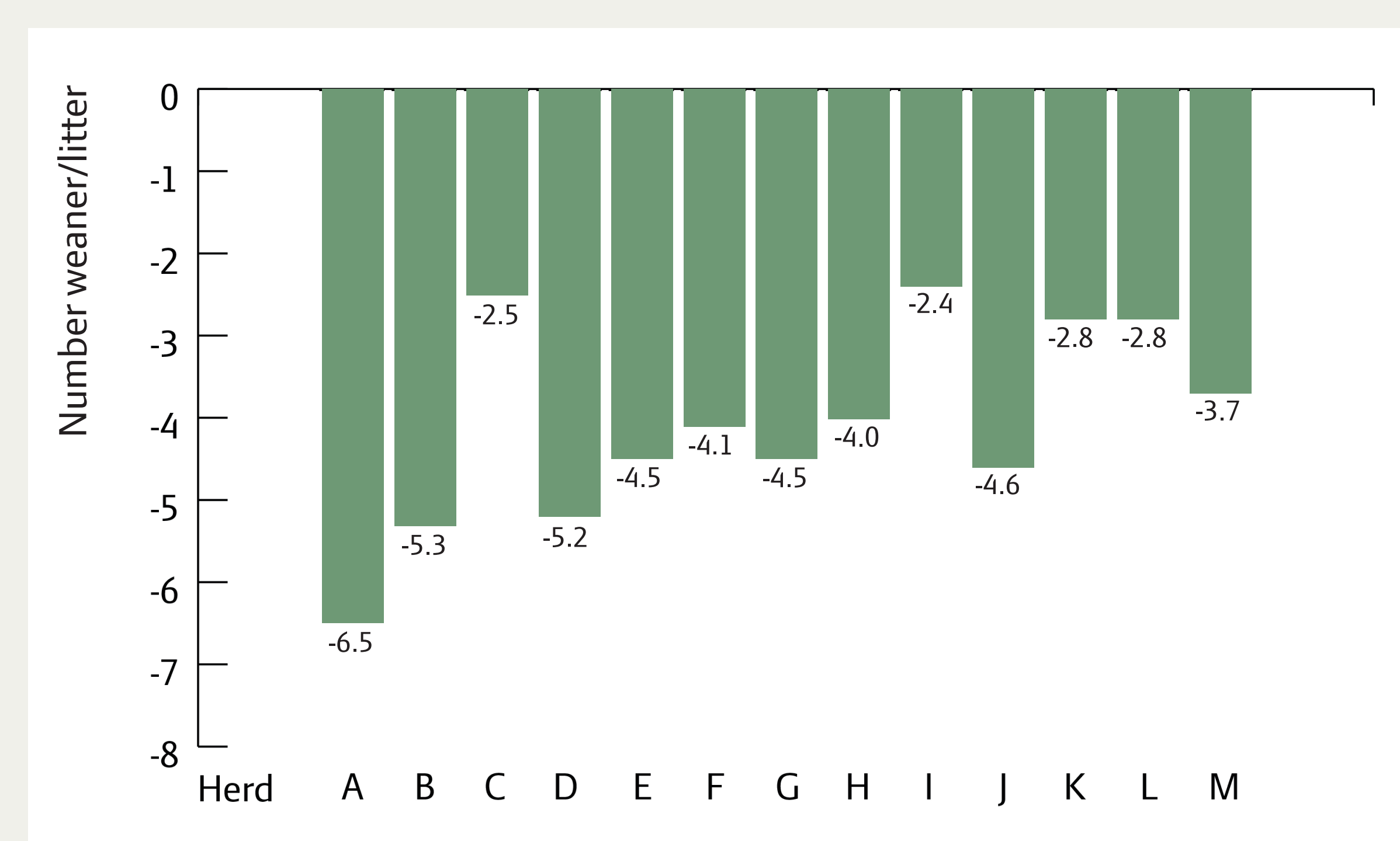
Results

The analyses of available samples predicted the most likely time of introduction of the virus into the boar station to be during the first week of July. Between July 1 and 26, 71 breeding- and multiplier herds and approximately 630 production herds received semen from the boar station. Since the virus isolated in the boar station was different from all other PRRSV strains characterized globally, it was possible to confirm – by sequencing – if a given herd was infected through semen. Until November 2019, the new strain of PRRSV has been confirmed from four multiplier herds and from 36 production herds.

Pre-weaning mortality nearly doubled in half of the herds. Overall, the 13 herds were missing 2.4-6.5 pigs/litter at weaning during the five months after infection compared to the seven preceding months before infection.

CONCLUSION

- PRRSV was spread to around 5 % of the herds receiving semen from the boar station.
- The surveillance protocol for boar stations was revised.
- The production losses in the herds exceeded that typically seen in Danish herds infected with PRRSV-1.



Development in pigs weaned/litter when comparing the five-month period after infection with the new PRRS1-variant to the preceding seven months in the 13 herds included in the study.

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