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TITLE

PCR DETECTION OF MYCOPLASMA HYOPNEUMONIAE ASSOCIATED WITH PROCESSING FLUIDS: A NEW MONITORING TOOL?

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CONTENT

Background and objectives

Mycoplasma hyopneumoniae (Mhp) has economic implications for the swine industry, mostly in the growing finisher stage. The breeding herd and more specifically transmission in the farrowing room play a role in Mhp prevalence of the growing phase. Young parity sows are usually major shedders of the bacterium.

The use of processing fluids (PF) to detect and monitor viruses in the breeding herd is increasing among producers and veterinarians due to the ease of collection and low costs compared to other sampling types. However, the use of PF for detection of bacterial infectious agents endemic to the sow farm, such as Mhp, has not been investigated. Here we investigate the unusual report of detection of Mhp in the PF in a Mhp positive breeding herd.

Material & Methods

A sow farm with a history of Mhp infection in the downstream flow pigs and a RT-PCR positive in PF was selected. Twenty one litters due to process were conveniently selected. Testicles and tails of each litter were collected separately. In addition, the interior of the scrotum was swabbed. Laryngeal swabs were collected from dams of all selected litters.

Results

Mhp was identified in 38% PF (8/21) using a species-specific real-time PCR. The farm in which positive samples were obtained is positive for Mhp, but considered subclinical, as no clinical signs are evident. Furthermore, in our results the odds of a PCR positive PF tended to be higher in gilts compared to multiparous sows (OR = 3.2).

Discussion & Conclusions

These initial results may contradict the common knowledge of Mhp restriction to the respiratory tissue and certainly challenge the understanding of this microorganism. Therefore, studies are underway to evaluate whether Mhp can be accurately detected in PF or whether these are results of environmental contamination, or lack of diagnostic accuracy.