



HERD HEALTH MANAGEMENT & ECONOMY

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TRACHEOBRONCHIAL SWAB SAMPLING CONFIRMS *MYCOPLASMA HYOPNEUMONIAE* IN A CENTRAL EUROPEAN SPF BREEDING HERD

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Introduction

Dedicated programs to monitor for freedom of several economically important diseases are present within most breeding companies currently delivering high health breeding animals to their end customers. Serology is the preferential approach in order to screen for most of these diseases, such as *Mycoplasma hyopneumoniae* (*M.hyo*). However, in case of positive serology, further decisions on farm health status and related consequences are based on detection of the pathogen. The objective was to detect *M. hyo* using trachea-bronchial swab (TBS) sampling following dubious *M. hyo*-seropositivity.

Materials & methods

A high health breeding farms in Central Europe (25 years SPF) was shown positive for *M.hyo* using the conventional ELISA serology. Looking for confirmation with a second ELISA test, however, samples showed negative serology. Moreover, throughout the entire monitoring period, no coughing, necropsy lesions or lesions at slaughter could be detected. Therefore, TBS was used to confirm the health status for *M.hyo*. In total 162 samples were collected at different ages (3-6-9-12-15-18-21-24-27 weeks) to detect *M. hyo* with 99% certainty at 2% prevalence level.

Results

ELISA S/P ratios were 0.86 ± 0.15 at first *M. hyo* detection in March 2017. Thereafter, the S/P ratios gradually decreased. Collected TBS samples were negative until 15 wk of age, but older gilts (18-27 wks of age) were shown highly *M.hyo*-positive (83-100%). The *M. hyo* load was moderate to high based on the average Ct-values of nPCR.

Discussion & Conclusions

TBS samples demonstrated no infection until 15 weeks of age, however, older rearing gilts were shown positive. These results imply potential eradication possibilities with partial depopulation/repopulation of the gilt rearing facilities. In conclusion, PCR testing of TBS samples confirmed the presence of *M. hyo* in a herd that was serologically doubtful for *M. hyo* without typical clinical signs of *M. hyo* infection.