Risk factors for seropositivity to *Mycoplasma hyopneumoniae* and severity of clinical symptoms of enzootic pneumonia in fattening pigs

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Our aim was to examine potential risk factors associated with the occurrence of enzootic pneumonia in a region of high pig density (>800 pigs per 100 ha), where majority of herds is endemically infected with *Mycoplasma hyopneumoniae*. Overall 112 herds were enrolled in this study, which included collection of epidemiological data by personal interview with farmers and investigation of the pigs’ environment. Clinical examination of fattening pigs included measuring the coughing index [C-Ind] and assessing seropositivity to *M. hyopneumoniae* [SP in %], SIV and PRRSV in finishing pigs. In a multinominal regression model three different groups were defined to identify risk factors for the within-herd transmission of *M. hyopneumoniae* and the occurrence of clinical symptoms: 25 ‘healthy’ herds (C-Ind <2.5, SP <0.5), 35 herds with high ‘seropositivity’ only (C-Ind <2.5, SP ≥0.5) and 40 herds with ‘disease’ (C-Ind ≥2.5, SP ≥0.5). An increase of the age of piglets at weaning could be identified as risk for both, ‘seropositivity’ and ‘disease’. Any contact between fattening pigs of different age during restocking of compartments increased the risk for ‘disease’. The use of living animals for the exposition to replacement gilts during the acclimatisation in the herd and an increase in the number of weaned piglets per sow per year were protective in terms of ‘seropositivity’ and ‘disease’. In this study, focusing on risks of within-herd transmission of *M. hyopneumoniae* and on the occurrence of clinical symptoms of enzootic pneumonia in fattening pigs, new aspects, namely the duration of the suckling period and the link to high sow herd productivity, likely reflecting good hygiene and management measures, were identified.