Annual incidence, prevalence and transmission characteristics of Streptococcus agalactiae in Danish dairy herds - DTU Orbit (14/12/2018)

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Contagious mastitis pathogens continue to pose an economic threat to the dairy industry. An understanding of their frequency and transmission dynamics is central to evaluating the effectiveness of control programmes. The objectives of this study were twofold: (1) to estimate the annual herd-level incidence rates and apparent prevalences of Streptococcus agalactiae (S. agalactiae) in the population of Danish dairy cattle herds over a 10-year period from 2000 to 2009 inclusive and (2) to estimate the herd-level entry and exit rates (demographic parameters), the transmission parameter, β, and recovery rate for S. agalactiae infection.

Data covering the specified period, on bacteriological culture of all bulk tank milk samples collected annually as part of the mandatory Danish S. agalactiae surveillance scheme, were extracted from the Danish Cattle Database and subsequently analysed. There was an increasing trend in both the incidence and prevalence of S. agalactiae over the study period. Per 100 herd-years the value of β was 54.1 (95% confidence interval [CI] 46.0–63.7); entry rate 0.3 (95% CI 0.2–0.4); infection-related exit rate 7.1 (95% CI 5.6–8.9); non-infection related exit rate 9.2 (95% CI 7.4–11.5) and recovery rate 40.0 (95% CI 36.8–43.5). This study demonstrates a need to tighten the current controls against S. agalactiae in order to lower its incidence.

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