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Coccidia infections in Danish farmed mink

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Although Danish farmed mink are frequently infected with Coccidia, knowledge of factors affecting the infection is scarce. Thus, we studied age, geographical and season-related factors affecting coccidia prevalence. Unsporulated oocysts excretion was quantified microscopically \(n=4142\) every 7-14th day (April-October 2016) from bitches and cups on 30 farms \(n=335\) mink) from South- or North Jutland, or Zealand. Minimum once, 60.9\% \(n=204\) mink excreted *Eimeria*, 56.7\% \(n=190\) *Isospora* and 20.9\% \(n=70\) excreted both coccidia. Positive mink were identified on all farms. *Eimeria* prevalence was higher on the Zealand farms \(25.4\pm2.2\%, P<0.0001\) compared to South- and North Jutland farms \(5.4\pm2.9\%; 7.5\pm4.1\%\). *Isospora* prevalence was similar regardless of farm locality \(12.2\pm2.9\%, 11.8\pm3.5\%, 9.2\pm7.1\%\). *Eimeria* prevalence peaked in June-July \(12.6\%-24.9\%\), while *Isospora* prevalence peaked in July-August \(12.1\%-27.6\%). More cups \(19.5\%) than bitches \(4.6\%) were *Isospora* positive, while *Eimeria* prevalence was similar for cups \(15.7\%) and bitches \(10.5\%). For cups, *Eimeria* prevalence peaked when cups were 7-11 weeks old and again when 18-24 weeks old. *Isospora* prevalence peaked in cups 13-15 weeks old. Three *Eimeria* types were characterized by size and wall thickness (unverified by PCR); A, B and C. Types B and C \(40.9\%, 39.8\%) were more prevalent than A \(19.3\%). Bitches were primarily infected with type B \(50.4\%), while type C \(48.0\%) predominated in cups. Type B infections dominated in mink from Zealand \(56.5\pm13.7\%), while mink from Jutland were primarily infected with type C \(55.6\pm28.6\%; 81.9\pm19.4\%). Farmed mink showed high coccidia prevalence with seasonal- and age-related *Isospora* prevalence, and seasonal- and geographical-related *Eimeria* prevalence.