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ORIGINAL RESEARCH

Risk factors associated with occurrence of nematodes in free range pigs in Busia District, Kenya

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Abstract Nematode infections are a serious constraint to pig production, especially where free range pig keeping is practiced. This study investigated the epidemiology of nematodes in free range pigs in Busia District, Kenya. Three hundred and six pigs from 135 farms were sampled for faeces that were analysed for nematode eggs per gram (EPG) of faeces using the McMaster technique. The nematode eggs were also identified to genus and species based on morphology. A questionnaire on risk factors was also administered to the pig owners. The overall prevalence and mean nematode EPG were 84.2% and 2,355, respectively. The nematode eggs were identified as those belonging to Oesophagostomum spp. (75%), Strongyloides ransomi (37%), Ascaris suum (18%), Metastrongylus spp. (11%), Trichuris suis (7%) and Physocephalus sexalatus (3%). The prevalence of nematodes was positively correlated ($p<0.05$) with the amount of rainfall in the division of the pigs' origin (all nematodes except S. ransomi). The prevalence of nematodes was also associated with the age of the pigs. A lower burden of nematodes was associated ($p<0.05$) with a history of deworming (A. suum) and the provision of night housing (S. ransomi and Metastrongylus spp.). In conclusion, this study has provided information on nematode infections and the associated risk factors for free range pigs in Busia District, which can be used when implementing integrated control measures.

Keywords: Associations. Kenya. Pigs. Nematodes. Risk factors.