

Neospora caninum Infection in Cattle and Dogs in Iran: A Systematic Review and Meta-Analysis

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Abstract

Neosporosis, a parasitic infection caused by *Neospora caninum* (*N. caninum*), is one of the main contagious factors that cause reproductive disturbances in cattle and neuromuscular complaints in dogs. This review was performed to determine the prevalence of cattle and dogs neosporosis in Iran. Data were systematically gathered from January 2004 to July 2020 in the Islamic Republic of Iran from the following electronic databases: PubMed, Google Scholar, Science Direct, Scopus, Web of Science, Elmnet, Magiran, Irandoc, Iranmedex, Scientific Information Database (SID) and civilica. In cattle, 57 studies and in dogs 28 studies reporting the prevalence of neosporosis in different areas of Iran found which met our eligibility criteria. In total, the pooled prevalence of neosporosis, using a random-effect model, was estimated 24.2% (95% CI, 21.5-26.9) in cattle and 19.9% (95% CI, 15.3-24.4) in dogs. Furthermore, the majority of neosporosis cases were in the Southwest (37% in cattle and 30.6% in dogs) provinces of Iran. In conclusion, the pooled prevalence of cattle and dogs neosporosis in Iran is relatively high. This value differs among geographical regions as it is the maximum in the southwest for both and the minimum in the northeast for cattle and the southeast for dogs of Iran. These results are desirable for managing the control programs of this infection.