

***Neospora* and neosporosis: achievement and perspectives in epidemiology, economics and control**

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Abstract

Neospora caninum is a major cause of bovine abortion world-wide. There is evidence that the prevalence at both, herd and individual level, can vary considerably between different regions and countries. Several studies have been conducted to identify potential risk factors for bovine infection with *N. caninum* and for *N. caninum*-associated abortions in cattle, indicating that factors related to the presence of dogs in cattle farms, regional dog density, herd and herd management parameters as well as climatic factors may be important. As a means of control, breeding with seronegative dams has been proposed. It is evident, however, that excluding seropositive dams or their progeny represents only a useful measure if the transmission of the infection is dominated by the endogenous

transplacental route. By selecting seronegative animals, a naive population is created so that horizontal infection with *N. caninum* may have serious consequences, i.e. high losses due to epidemic abortion. For the purpose of embryo transfer, recipient cows should be tested for neosporosis and exclusively seronegative animals used. General recommendations to prevent neosporosis include preventing dogs from eating aborted fetuses or placentas, safe disposal of aborted fetuses and placentas, preventing contamination of feed and water with dog faeces, control of rodents that might serve as intermediate hosts for *N. caninum*. Attempts to control neosporosis by chemotherapeutic measures are still at an experimental level, but may open new perspectives. Chances and limitations for vaccinating against *N. caninum*-associated abortions will be discussed.