

Relevance of the Indirect ELISA comparing to Real-Time PCR for Q fever diagnosis in sheep

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Q fever is a zoonosis widely reported in the world. The causative agent is *Coxiella burnetii*, an obligate intracellular bacterium. Clinically, the infection is asymptomatic in ruminants, but it can lead to reproduction disorders. In order to determinate the relevance of the Indirect ELISA comparing to Real-Time PCR for the diagnosis of Q fever in ewes at lambing or abortion period, a study was conducted with 56 sera and 61 vaginal swabs collected from the same females. The indirect ELISA was used to detect specific antibodies against *C. burnetii* and RT-PCR to detect bacterial DNA after shedding. Results indicate that 7 sera have a positive value in ELISA test and all the RT-PCR were negatives. Our findings can be only interpreted as an evidence of a previous infection or an ancient exposure to *C. burnetii* and Q fever has a relatively low role in abortion in the study area. We suggest that the indirect ELISA cannot be performed to detect a Q fever infection at an individual level, it becomes very useful for studies at population, especially when laboratories where Q fever can be diagnosed are limited.