

Title: *TOXOPLASMA GONDII* IN OVINE BRAZILIAN BREED SCREENED BY IMMUNOSORBENT ASSAY

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Abstract

Toxoplasmosis is worldwide spread and frequent zoonosis caused by the contact of host to *Toxoplasma gondii*, a protozoan parasite. Several domestic animals can be affected by the *T. gondii*, including sheep. The transmission to humans can be congenital, when pregnant woman are exposed to the parasite and the fetus can develop micro and macro encephalitis, mental retardation, abortion, etc. In animals, transmission can be congenital or can be done by saliva, milk or semen containing *Toxoplasma gondii*. Ovine are nowadays highly potential transmitters, where the parasite cists are found in animal tissue for long periods of time. Disease diagnoses are needed to avoid economic losses and human health problems. Despite immunofluorescence is the most used confirmatory test to diagnose *T. gondii*, ELISA tests were used in this study to screen animals from two Brazilian ovine breeds: Santa Inês and Morada Nova, at IZ. For those, 181 animals from both breeds were tested using the IDEXX *Toxoplasma gondii* test kit, using sera as biological sample. Blood was taken from jugular vein and centrifugation was performed. Sera were separated and kept frozen. Presence of *T. gondii* antibodies were verified in EIA test and read at Biotech microplate reader, analyzed by Xchek 3.3 software. O.D. showed around 76 and 90 % of negative animals; 14 and 3% positive and from suspicious and low positive (commercial test parameters), 10 and 7 %, respectively from Santa Inês and Morada Nova breeds. ELISA tests are fast, easy and reliable in the farm. Once the amount of sera used is minimum (1 ul), same blood harvested can be used for several screening diseases, avoiding animal stress. For this herd tested, 83 % from the tested animals were negative for *T.gondii* immunoglobulins, higher than São Paulo State average of healthy animals, which is 60 %. A confirmatory test need to be ran to testified the presence of the pathogen in the blood, by Immunofluorescence but there were no differences from both breeds and our results show the management of those herds are essential to guarantee quality meat and food safety and security.

Key words ELISA, Santa Inês, Morada Nova, immunoassays

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