

## *Toxoplasma gondii* in sheep in Palermo province, Sicily, Italy

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### Abstract

**Aim.** The purpose of the study was to determine the burden of *Toxoplasma*-infections in sheep in Sicily, to assess the importance of sheep and lamb as a source of infections in humans.

**Methods.** Sera from 2018 sheep and lambs were collected just before slaughtering, representing animals from all age groups from 72 farms. The sera was analysed for *Toxoplasma*-specific IgG antibodies by commercially available immunofluorescence, enzyme-linked immunosorbent assays were compared, Western -and line blot. Data on farm size and location were provided by veterinarians of National Sanitary Service.

**Results.** The overall seroprevalence of *Toxoplasma*-specific IgG-antibodies were 49.3% and the seroprevalence increased with age. 86.1% of the farms had at least one *Toxoplasma*-positive animal and there was no relation with farm size and seroprevalence. All farms had the animals outside on pasture and only one was claiming organic (animal-friendly) farming. Having cats on the farm was a significant risk factor for having *Toxoplasma gondii*-infected animals ( $p \leq 0.001$ ).

**Conclusion.** *Toxoplasma gondii* infection in sheep used for human consumption is very prevalent, and eating unprocessed sheep and lamb meat has a high risk of transmitting infections to humans.