

**Herd-level prevalence and risk factors associated with herds infected with *Mycobacterium avium* subsp. *paratuberculosis*, in dairy herds of Chile**

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The aims of this study were; to estimate herd-level prevalence of *M. paratuberculosis* infection from bulk tank milk (BTM) and environmental samples collected from dairy herds and to estimate associations between management practices of the farm and the status of infection. A cross-sectional study was performed on a stratified (by herd size) random sample of 150 dairy herds in the main dairy area of Chile. A real-time qPCR on BTM samples and cultura of environmental were used in parallel as diagnostic tests to determine the infection status of the herd. MAP was isolated from environmental samples using the protocol recommended by the USDA. In addition, at the day of sampling, a survey was completed on each farm, that is aimed to collect information from the farm that could be associated as herd-level risk factors for the disease, assessed through a logistic regression analysis. The overall prevalence of infected herds was 60.7% (95% CI 52.8; 68.5). The prevalence for Large herds was 85.7% (95% CI 67.4; 100.0), for medium herds 70.3% (95% CI 55.5; 85,0) and for small 53.5% (95% CI 43.7; 63,4) and the differences were statistically not significant ( $P<0.05$ ). The final model contents 3 variables: Young stock contact with animals older than one year by paddocks rotation (Yes vs. No) OR=2.8 (1.2;6.4); Grouping production cows by milk yield (Yes vs. No) OR=3.3 (1.1;10.8); Paddocks used for calves are only used for calves (Yes vs. No) OR=2.4 (1.1;6.1). The prevalence of infected herds is high but similar to other countries and it was identified some management practices associated with infection status of the herds – mainly related with young stock – that could be added to current recommendations, to help the control the transmission. Study funded by FONDECYT # 1101020.