Herd-level prevalence and risk factors associated with herds infected with bovine viral diarrhea virus (BVDV) infection, in dairy herds of Chile

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The aims of this study were to assess the Prevalence of Herds with Active BVDV Infection (PHAI) on bulk tank milk (BTM) samples collected from dairy herds and individuals, and to estimate associations between management practices of the farm and the status of infection. A cross-sectional study was performed and it was obtained a stratified (by herd size) random sample of 150 dairy herds in the main dairy area of Chile. A RT_PCR on BTM or at least 1 positive animal to ELISA for antigen from a sample of cows within-herd (proportional to herd size) was used to assess the infection status of the herd. 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 by a logistic regression analysis. The overall PHAI was 81.2% (95% CI 74.1; 88.3). The PHAI for Large herds was 100.0% (100.0; 100.0), for medium herds 89.7% (78.6; 100.0) and for small 75.9 (66.5; 85.4) and the differences were statistically not significant (P<0.05). The final model included; Calves shared springs with other cattle within-farm (Yes vs No) OR=3.2 (1.1; 9.3); Young stock contact with animals GT 1 Yr from neighbors through fences (Yes vs No) OR=2.4 (0.9; 6.6); Presence of fox in the farm (Yes vs No) OR=0.4 (0.1; 1.0); Young stock contact with animals GT 1 Yr by paddocks rotation (Yes vs No) OR=0.3 (0.1; 0.9). The prevalence of infected herds is high and it was identified management practices associated with infection status of the herds that could help to control the transmission. Study funded by FONDECYT # 1101020.