Herd-level risk factors associated with seropositivity for antileptospiral agglutinins in dairy cattle: Minas Gerais, Brazil, 2010

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Our objective was to determine herd-level risk factors associated with seropositivity for *Leptospira* spp. in a large number of randomly selected Brazilian dairy herds. Serum samples were obtained from 2,915 randomly selected cows from 151 herds in eleven municipalities located in the Sete Lagoas microregion, a large dairy cattle region. The technique used was the microscopic agglutination test (MAT) for leptospirosis agglutinins. All herd-level predictors were obtained through personal interviews with questionnaires administrated to each farm manager. A logistic-regression model was built using *Leptospira* spp. serostatus at the herd-level as the outcome variable. All variables were first subjected to univariate analysis, where those with a significance level (P<0.20) were subsequently used for the development of multivariate models (P<0.05), which were divided into two categories: animal’s management and biosecurity. In the category of animal’s management, the use of rotational grazing for dairy cows (OR=3.52) was set up as a risk factor. The protection factors were shelter for calves in individual houses (OR=0.17), the bull does not stay in a paddock collective (OR=0.05) and provide milk replacer for calves (OR=0.25). In the questions relating to biosafety, the presence of a Medical Veterinarian in the property was a protective factor (OR=0.20) and the factors controlling ectoparasites by injection (OR=2.82), using the same equipment for cleaning up the environment for feeding animals (OR=3.58) and the request for serological tests of the animals before purchasing (OR=4.46), due to examination of leptospirosis is not part of this routine, are risk factors for the disease. Funding: CNPq, FAPEMIG and INCT-Pecuária.