A252 Embryology, developmental biology, and physiology of reproduction

Variation of seroprevalence of bovine viral diarrhea (BVD), infectious bovine rhinotracheitis (IBR), leptospirosis and neosporosis in dairy herds from different regions of Rio Grande do Sul

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Reproductive disorders, such as embryonic death, abortion, repeat breeder cows lead to decreased reproductive efficiency and consequent milk production. Frequently, the etiology of reproductive losses is related to the occurrence of infectious diseases, such as leptospirosis, infectious bovine rhinotracheitis (IBR), bovine viral diarrhea (BVD) and neosporosis, causing great economic losses. Strategies for diseases prevention may vary from region to region according to disease prevalence as well as their respective risk factors. The objective of the study was to estimate seroprevalence among individuals for leptospirosis, IBR, BVD and neosporosis in dairy cattle in different meso regions of the state of Rio Grande do Sul. Simple random sampling was performed considering an expected seroprevalence of 50% for IBR, BVD and leptospirosis and 15% for neosporosis. The 95% confidence level and 5% sample error were the other parameters used in the calculation of the sample size. Blood samples were collected in different mesoregions: MR1 (north-west and northeast, n=459), MR2 (north-west, n= 259), MR3 (south-west and southeast, n=373) for laboratory diagnosis by enzyme-linked immunosorbent assay (ELISA) Seroprevalence for IBR was was 61% (MR1), 54.8% (MR2) and 59.7% (MR3), with no difference (P> 0.05) among mesoregions. For BVD no difference (P> 0.05) was found between the seroprevalences according to the mesoregions (45.5% MR1, 30.1% MR2 and 39.9% MR3). For the neosporosis, higher serum prevalence (34.6%; P <0.05) was observed in the north-west mesoregion (MR2) compared to other mesoregions (24.5% MR1 and 21.7% MR3). In the case of leptospirosis, the highest serum prevalence was 27.5% in the southeast-southwest mesoregion (MR3), which differed (P <0.05) from other mesoregions (15.2% MR2, 17.8% MR1). The results indicate that IBR and BVD were homogeneously distributed according to the mesoregions studied. However, mesoregions with higher sero-prevalence were identified for leptospirosis and neosporosis, indicating a spatial variation in the health problems of these diseases.