

COMPARATIVE SURVEY OF SEROPREVALENCE OF ANTIBODIES TO BOVINE VIRAL DIARRHOEA VIRUS AND ROTAVIRUS IN CATTLE

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Summary. The aim of this study was to estimate the prevalence of antibodies to BVDV and RV in cattle, to describe the association between the size of herd and number of seropositive animals, and to evaluate the possible influence of BVDV infection on RV spreading. Blood sera samples were taken from cows from 51 herds in 5 administrative districts of Northern Lithuania. Herds' size ranged from 3 to 400 cows. Herds with >100 cows were considered large (n = 11) and other 40 small herds had less than 10 cattle. Blood sera samples were tested for the presence of antibodies against BVDV in commercial competition ELISA test kit. The presence of antibodies against RV was tested in modified blocking ELISA.

A comparison of serodistribution dynamics of BVDV and RV infections in cattle of different size herds has revealed the antibodies against BVDV and RV in cattle from the most of the large herds. The prevalence of antibodies to RV in large and small herds of unvaccinated cattle was comparable - 90.1% and 91.1%, respectively ($P > 0.05$). The number of antibodies to BVDV carriers in large herds was 2.7 times higher than in small units ($P < 0.05$). Our results have shown no association between the size of the herd and the number of seropositive to RV animals. It was estimated that 97.5 % of small and all large herds respectively were seropositive to RV. In contrast, the high dominance of BVDV infected large herds and BVDV naive small herds was found. However, any impact of BVDV infection on prevalence of antibodies to RV has been determined.

Keywords: bovine viral diarrhoea virus, rotavirus, antibodies, epidemiology.