

SEROPREVALENCE TO BOVINE VIRAL DIARRHOEA AND INFECTIOUS BOVINE RHINOTRACHEITIS VIRUSES IN A NON-VACCINATED DAIRY CATTLE IN LATVIA

Anda VALDOVSKA, Ivars LŪSIS

Latvia University of Agriculture, Faculty of Veterinary Medicine

K.Helmana 8, LV-3001, Jelgava, Latvia

Email: anda.valdovska@llu.lv

Abstract. *Infection with bovine viral diarrhoea (BVD) virus is recognized throughout the world as one of the main causes of reproductive disorders. Infectious bovine rhinotracheitis (IBR) virus infection most cases run a mild or subclinical course, therefore any animal with antibodies to the virus is considered to be a carrier and potential intermittent excretor of the virus.*

The aim of the study was to determine the prevalence of serum antibodies to IBR and BVD viruses in the dairy cattle herds in Latvia.

A survey of BVD and IBR viruses infections were carried out in a non-vaccinated cattle population from the all regions of Latvia during 2013-2014. Bulk milk samples were selected from 80 herds and blood samples were collected from 578 animals in age from 7 to 11 months. Sera were tested for antibodies using indirect ELISA method in the laboratory of Research institute „BIOR” in accordance to guidelines of OIE Manual Terr.ch. 2.4.13 and 2.4.8.

According to results of bulk milk samples, the prevalence of BVDV and IBRV antibody-positive herds were 19% and 15%, respectively. Exposure to BVD virus was distributed in large and middle size herds, but IBR virus in large ones. Seropositivity to both viruses in 9% of the herds was observed. Sixteen of serotested herds (21%) had at least one positive animal to BVD and six herds (8%) – to IBR viruses. The animal seroprevalence to BVDV was 14%, to IBRV – 4%, but to both viruses – 1.5%. A positive correlation between the number of seropositive cattle and the size of herds was determined.

Conclusions. The fact that vaccination is not practiced in the herds sampled and that had seroprevalence to BVDV and IBRV in animals above 10% indicates that cattles have been previously exposed to above mentioned viruses and that the population is unlikely to contain persistently infected individuals.

Key words: BVD, rhinotracheitis, IBR, bovine.

ACKNOWLEDGEMENTS

The authors are grateful to Ministry of Agriculture Funds for financial support of this work (agreement No 2013/86).