

REMARKS ON THE PREVALENCE OF SOME VIRAL RESPIRATORY DISEASES IN CATTLE

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***ABSTRACT** - Serological screening using the ELISA blocking test on 114 serum samples taken from cattle that haven't been vaccinated had positive results for bovine viral diarrhoea virus (BVD-MD) at a percentage of 43% and for rhino-tracheitis virus (IBR-IPV), the percentage was of 68.42%. The positive results can be explained by the presence of the virus in herds, where the diseases have a subclinical evolution. The serologic investigation using the ELISA blocking test has established the serological prevalence of infections with BVD-MD and IBR-IPV in three farms from Moldavia, the highest prevalence being registered in the case of rhino-tracheitis virus (IBR-IPV). The presence of positive reactions, corroborated with the lack of clinical signs in herd can be explained by the presence of latent infections. A wide variety of stimuli such as stress, transport and treatment with corticosteroids may lead to the reactivation of the disease from latency. The obtained results suggest that an extension of serologic investigations in more farms was necessary for finding the animals with subclinical forms.*

Key words: ELISA Test, bovine viral diarrhoea virus, rhino-tracheitis virus

INTRODUCTION

The respiratory infections of cattle present a great importance because of polyfactorial etiology and susceptibility. Among all the microorganisms incriminated in the etiology of cattle respiratory diseases, viruses have a major role. They produce primary infections with epidemiological and anatomo-clinical specificities, which are frequently complicated by bacterial infections (www.oie.int, 2004; Merk Veterinary Book, 1998).

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Our investigations had as main objective to establish the prevalence of infections with BVD-MD and IBR-IPV viruses in a few cattle farms from Moldavia, using the serological test (Perianu et al., 2005).

MATERIALS AND METHODS

For establishing the prevalence of IBR-IPV and BVD-MD infections, 114 serum samples were taken from three cattle farms situated in Moldavia. For the detection of specific antibodies for glycoprotein B of BHV-1 and protein P80 of bovine viral diarrhoea virus (BVD-MD), we have used the ELISA blocking test.

RESULTS AND DISCUSSION

The serological examination carried out on 114 serum samples taken from cattle, for establishing the prevalence of infection with BHV-1 and BVD-MD viruses lead to the results presented in *Tables 1, 2*.

Table 1

The results of the serological tests for BVD-MD

Farm	Samples	Positive	Negative	Uncertain	% Positive
F1	20	4	16	0	20%
F2	80	30	45	5	37.5%
F3	14	6	7	1	42.85%
Total	114	40	68	6	35.08%

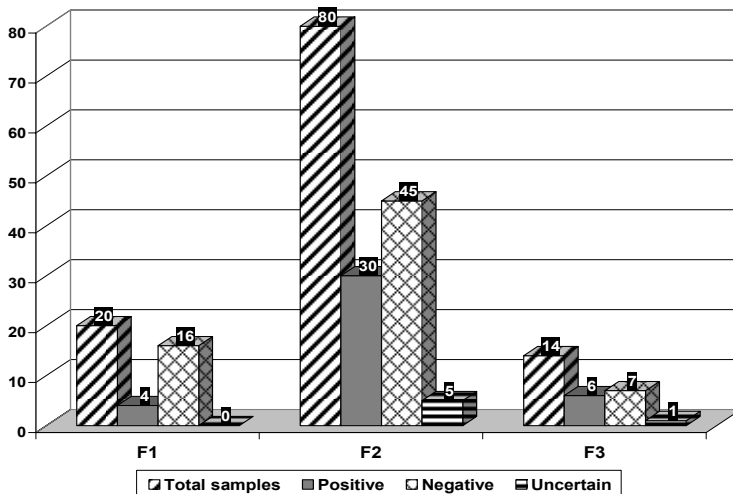


Figure 1 - The results of the serological tests for BVD-MD

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The analysis of the results obtained has shown that from 114 samples, 40 samples (35.08%) have positively reacted to BVD.

Table 2

The results of the serological tests for IBR

Farm	Samples	Positive	Negative	Uncertain	% Positive
F1	20	4	16	0	20%
F2	80	60	19	1	75%
F3	14	14	0	0	100%
Total	114	78	35	1	68.42%

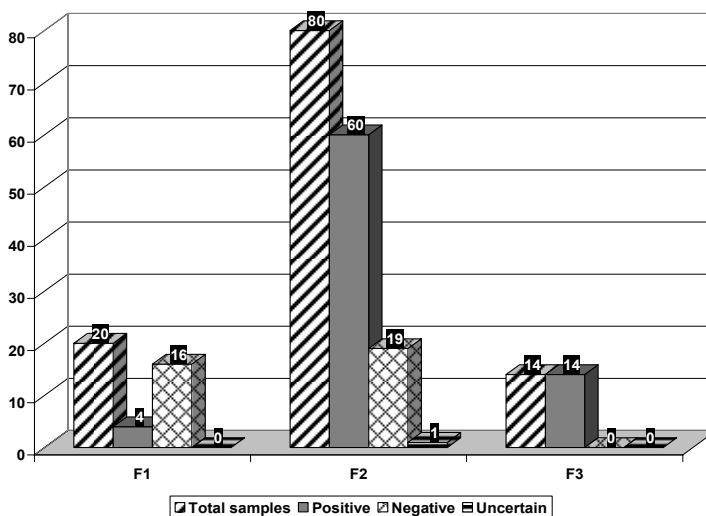


Figure 2 - The results of the serological tests for IBR

The high percentage in the case of samples for IBR-IPV (78 samples with positive results from 114 samples - 68.42%), has shown the enzootic trait of the disease, with great diffusion in focus.

The results from *Tables 1 and 2* pointed out that all the investigated samples presented seropositive animals for IBR-IPV and BVD-MD. The percentage of the positive reactions differed from one farm to another. The results reflected the real situation of the year 2005.

The obtained results, following the serological tests of samples have shown that both the viral diseases have evolved simultaneously. Almost all the samples were found positive for BVD-MD and IBR-IPV.

CONCLUSIONS

The serological investigation using the ELISA blocking test has established the serological prevalence of infections with BVD-MD and IBR-IPV in three farms from Moldavia, the highest prevalence being registered in the case of IBR-IPV.

The presence of positive reactions, corroborated with the lack of clinical signs in herd can be explained by the presence of latent infections. A wide variety of stimuli such as stress, transport and treatment with corticosteroids may lead to the reactivation of the disease from latency.

The obtained results suggest that an extension of serological investigations in more farms is necessary for finding the animals with subclinical forms.

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