

Seroprevalence of Infectious Bovine Rhinotracheitis in Breeding Bulls of Assam

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Abstract: Prevalence of IBR in breeding bulls of Assam was 15.68%. Bulls between the age group of 3-4 years were having the highest prevalence (9.80%) and lowest (1.96%) above 4 years of age. Breed wise, the prevalence rate was highest in Holstein Friesian (9.80%) and lowest in Jersey Cross breed (1.96%).

Keywords: Seroprevalence, IBR, Breeding bull, Assam.

I. Introduction

Infectious bovine rhinotracheitis (IBR) commonly known as red nose is a disease of cattle & buffalo caused by BHV-1. Among the viral diseases, Infectious bovine rhinotracheitis (IBR) occupy a key position in cattle herds. The BHV-1 virus infections are mostly mild and non-life threatening. However, the introduction of IBR into a cattle farm can cause severe economic losses due to weight loss, decrease in milk production and restrictions in the international livestock trade. In India, more than 45 per cent of apparently healthy breeding bulls were reported to be seropositive for IBR and around 50 per cent of the semen produced by seropositive bulls tested positive for IBR virus [1]. A large number of serological tests are commonly used for the detection of IBR, among these A-B-ELISA is highly sensitive, specific and economic test for diagnosis of the disease since it allows the use of immune conjugates at very high dilution [3,4]. The present investigation was undertaken to establish the status of IBR prevalence in breeding bulls of Assam, India using avidin-biotin enzyme-linked immunosorbent assay (A-B ELISA).

II. Materials And Methods

A total of 51 serum samples were collected from apparently healthy breeding bulls of two different organised farms of Assam state, India. The sera were stored at -20°C till further use. Collected serum samples were subjected to Avidin Biotin-ELISA for detection of BHV-1 antibodies. An IBR A-B-ELISA kit for the specific detection of IBR antibodies along with the user manual was obtained from PD_ADMAS, Hebbal, Bengaluru India for performing the tests.

III. Result And Discussion

The overall sero prevalence of IBR was 15.68% in breeding bulls by A-B-ELISA technique. Bulls between the age group of 3-4 years were having the highest prevalence (9.80%) and lowest (1.96%) above 4 years of age. Breed wise the prevalence rate was highest in Holstein Friesian (9.80%) and lowest in Jersey Cross breed (1.96%). Similar result was also recorded by [2]. The prevalence of IBR might be due to the exotic germplasm, which renders them more susceptible to diseases and environmental stress factors. Conversely, the lower prevalence rate in crossbred bulls might be due to their relatively high resistance to diseases and better adaptation to the environmental conditions [1].

IV. Conclusion

In Present investigation, the overall prevalence of IBR in breeding bulls of Govt. farm of Assam was 15.68% in serum. The bulls between the age group of 3-4 years were having the highest prevalence rate (9.80%) and lowest prevalence (1.96%) was recorded in bulls above 4 years of age. Breed wise the prevalence rate was highest in Holstein Friesian (9.80%) and lowest in Jersey Cross breed (1.96%).

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