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SEROLOGICAL INVESTIGATION OF IBR AND MAP IN DAIRY COWS IN GREECE

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OBJECTIVE

Infectious Bovine Rhinotracheitis (IBR) is a viral disease of cattle caused by Bovine Herpes Virus 1 (BHV-1). It is characterised by fever, rhinotracheitis, abortions and stillbirths. Paratuberculosis is chronic enteritis mainly of ruminants caused by *Mycobacterium avium* subsp. *paratuberculosis* (MAP). The disease is characterized by intermittent chronic diarrhoea that leads to weight-loss, emaciation and often death. Both IBR and paratuberculosis have a significant financial impact due to loss of productivity that depending on the disease may refer to decrease milk and meat production and fertility rates.

The aim of the study was to define the level of seropositivity for IBR and paratuberculosis in dairy cows in Greece.

MATERIALS AND METHODS

Sampling

Blood sampling took place during summer of 2009. 550 serum samples were collected randomly from a part of Greece (Macedonia, Thrace, Thessaly, Epirus, Central Greece and Ionian Islands) that hosts 94% of the country's dairy cattle population. Sample size was defined so it would be representative of the targeted area at a 5% level of confidence.

Serological testing

BHV-1 specific IgG antibodies against glycoprotein E and MAP specific antibodies were detected using ELISA.

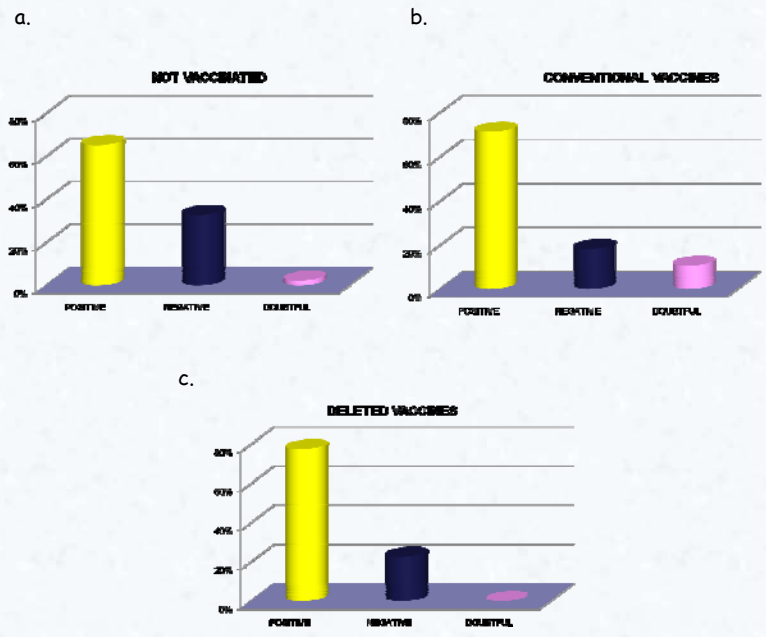

Figure 1. Prevalence of BHV-1 antibodies in not vaccinated animals (a) and vaccinated with conventional (b) and deleted (c) vaccines.

RESULTS

Of the animals tested 366 (66.5%) and 20 (3.64%) reacted positive for IBR and paratuberculosis, respectively.

Of all the positive reactors 295 were not vaccinated, 47 were vaccinated against IBR with the conventional vaccines and 24 with a deleted (Figure 1). None of the tested animals were vaccinated against paratuberculosis.

CONCLUSIONS

The recorded IBR seroprevalence proved higher in Greece compared to many other European countries. The level of MAP seropositivity on the other hand indicates low prevalence of paratuberculosis, which however cannot be considered conclusive due to the pathogenesis of the disease.

The results of this study indicate that the level of awareness for the spread of IBR and perhaps bovine paratuberculosis in Greece has to be raised in order to safeguard animal health, preserve quality and safety standards of animal products and increase profit in dairy farms.