Abstract

Rev - 1 vaccination is considered as the most successful and cost - effective method for prevention and control of brucellosis in small ruminants. Due to the region of Trás - os - Montes e Alto Douro (northeast of Portugal) presented the highest brucellosis prevalence of the small ruminant population of Portugal, and also the elevated cases of human brucellosis in the region, a Rev - 1 vaccination program of the entire population of small ruminants over 3 - months old was carried out from 2001 to 2004. In addition, compulsory Rev - 1 vaccination of the entire population of 3 - to 6 - month old kids was carried out from 2005 up to 2007. The animal and household prevalence of brucellosis decreased both in 2004 and 2007, compared to 2001, according to the flock size (p <0.001), flock constitution (p <0.001) and main animal production (p <0.001). The prevalence of the brucellosis decreased both for sheep and goat, however, only in goats was statistically significant (p <0.001). The differences observed according to flock size may associate to the scarce application of biosecurity measures and/or good farm practices. With regards of the specie, prevalence was higher for goats. According to the flock constitution, the prevalence of brucellosis was higher in mixed flocks. The largest prevalence observed in flock for meat production than dairy flocks may associated to the dominant type of production of the study area, however, the lower prevalence observed in dairy flock may associated to the control measures applied by farmers to avoid economical losses due to the lower milk price in case of positive - flock. These results are useful to develop brucellosis eradication programs more efficient and adapted to the several characteristics of the flocks in the vaccination area.

Keywords

Sheep, goats, Rev-1, brucellosis, prevalence, vaccination.