

THE PREVALENCE AND CAUSATIVE FACTORS OF BRUCELLOSIS ON CATTLE IN KUPANG DISTRICT

Abstract

Brucellosis is infectious disease caused by bacterium of Brucella genus categorized by Office International Des Epizootie as zoonosis disease. The prevalence of brucellosis in the district of Kupang was reported less than 2 %. Therefore, test and slaughter program has been instituted since 2003, however significant reduction of the prevalence has observed. The problem behind this fact is, among others, the fact that a comprehensive epidemiological investigation and the disease in the district has never been practiced. The objectives of the current study were to verify the prevalence of the disease in the district both at cattle and farm levels, factor associated with the odds of the disease in cattle, and those associated with the prevalence of the disease at farm level. A total 1047 serum samples of cattle belonging to 93 farms was multistage-randomly during the study. The serum were screened against brucellosis using Rose-Bengal Test (RBT) and Complement Fixation Test (CFT) for those reacted positive to RBT. A cattle was categorized as suffering from brucellosis if its CFT showed a positive reaction. Risk factor of cattle and farms were obtained by means of an interview to the farmers and field observation by the investigator. Association between a factor and brucellosis was tested using χ^2 and its strength was measured as odds ratio (OR). Logistic and linear regression models were used to evaluate the role of risk factor for the odds of the disease in individual cattle and its prevalence at farm level, respectively. The prevalence of brucellosis in cattle and at farm level was found to be, respectively 2 % and 1,61 %. The odds of brucellosis of a cattle is increased by abortion (OR=490,38) and pregnancy (OR=46,94), and decreased by intra-village origin (OR=0,01) and districts of low level reactors (OR= 0,11). Risk factors of animal density, moved farm, and water source increase the farm level brucellosis prevalence while communal bam decrease it.

Keywords: *brucellosis, prevalence, causative factors, kupang district*