

## **A case-control study of risk factors for bovine brucellosis seropositivity in Peninsular Malaysia**

### **ABSTRACT**

Bovine brucellosis was first reported in Peninsular Malaysia in 1950. A subsequent survey conducted in the country revealed that the disease was widespread. Current knowledge on the potential risk factors for brucellosis occurrence on cattle farms in Malaysia is lacking. Therefore, we conducted a case-control study to identify the potential herd-level risk factors for bovine brucellosis occurrence in four states in the country, namely Kelantan, Pahang, Selangor and Negeri Sembilan. Thirty-five cases and 36 controls of herds were selected where data on farm management, biosecurity, medical history and public health were collected. Multivariable logistic regression identified that *Brucella* seropositive herds were more likely to; have some interaction with wildlife (OR 8.9, 95% CI = 1.59–50.05); originated from farms where multiple species such as buffalo/others (OR 41.8, 95% CI = 3.94–443.19) and goat/sheep (OR 8.9, 95% CI = 1.10–71.83) were reared, practice extensive production system (OR 13.6, 95% CI 1.31–140.24) and have had episodes of abortion in the past (OR 51.8, 95% CI = 4.54–590.90) when compared to seronegative herds. Considering the lack of information on the epidemiology of bovine brucellosis in peninsular Malaysia and absence of information on preventing the inception or spread of the disease, this report could contribute to the on-going area-wise national brucellosis eradication program.

**Keyword:** Bovine brucellosis; Peninsular Malaysia; Risk factors