

Bovine brucellosis trends in Malaysia between 2000 and 2008

ABSTRACT

Background: Bovine brucellosis is an important disease affecting cattle characterised by abortion, still birth, reduced milk production, weak foetus and infertility in both males and females. There is wide distribution of the disease among cattle and several wildlife species. Bovine brucellosis is commonly caused by *B. abortus* and very occasionally *B. melitensis* and *B. suis*. The distribution of bovine brucellosis in cattle has not been described in Malaysia. In this paper we describe the distribution, pattern and trend of bovine brucellosis in Peninsular Malaysia between 2000 and 2008 based on serological data obtained from nationwide *B. abortus* serosurveillance activities in cattle populations. **Results:** Brucella antibodies were detected in 21.8% of sampled herds (95% CI, 21.01-22.59) and 2.5% (95% CI; 2.45-2.55) of sampled cattle. The state of Pahang had the highest animal and herd-level seroprevalence of 5.3 and 43.6%, respectively. The herd-level seroprevalence varied but remained high (18-26%) over the period of study and generally increased from 2000 to 2008. Seropositive herds clustered around the central part of the peninsula within the period of the study. The months of September, October and November illustrated the highest rates with corresponding seroprevalences of 33.2, 38.4 and 33.9%, respectively. A noticeable variation was observed in the cattle-level seroprevalence, but the rate remained relatively low (<5%). The chi-square statistics showed herd size ($\chi^2 = 1206.077$, $df = 2$, $p = 0.001$), breed ($\chi^2 = 37.429$, $df = 1$, $p = 0.001$), month of sampling ($\chi^2 = 51.596$, $df = 11$, $p = 0.001$), year ($\chi^2 = 40.08$, $df = 8$, $p = 0.001$) and state ($\chi^2 = 541.038$, $df = 10$, $p = 0.001$) to be associated with increased seropositivity. **Conclusion:** Bovine brucellosis is widespread among herds in Peninsular Malaysia at a low within-herd seroprevalence rate.

Keyword: Bovine brucellosis; Distribution; Epidemiology; Pattern; Trend.

