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Seroepidemiology of Brucella abortus infection in bovids in Sri Lanka.

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Abstract

From 1992 to 1995, 0.15% (n=3916) of the bovids (cattle and buffalo) in Sri Lanka were sampled, using a multi-stage sampling procedure. Serum antibodies for Brucella abortus were detected using the indirect enzyme-linked immunosorbent assay (ELISA). The age, the agroecological zone and the management system practiced in the farms of the sampled bovids were studied as risk factors for seropositivity. The overall seroprevalence of brucellosis in cattle was 4.7% (n=3076) and 4.2% in buffaloes (n=840). Bovids that were over 3 years of age, from the dry zone (annual rainfall 20-35 in.), and reared under an extensive management system had higher odds of being seropositive. Bovids from the dry zone were at approximately six times higher odds of being seropositive even after controlling for the possible effects of age and management system. Approximately 75% of the seropositive males were from the dry zone. Most bovids (84%) from the dry zone in this study were reared under an extensive management system (free grazing) which allows unrestricted contact between animals. These factors may have contributed to the spread of brucellosis in bovids in the dry zone. This infection might be an important cause of abortion in bovids in Sri Lanka. However, there is also evidence of other causes for abortion, repeat breeding and retained placenta.

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