

Epidemiological characterization of bovine brucellosis in Bahia State, Brazil

Alves AJS (1), Gonçalves VSP (2), Figueiredo VCF (3), Lôbo JR (3), Bahiense L (4), Amaku M (1), Ferreira F (1), Ferreira Neto JS (1), Dias RA (1)

(1) Department of Preventive Veterinary Medicine and Animal Health, Faculty of Veterinary Medicine, University of São Paulo

(2) Faculty of Agronomy and Veterinary Medicine, University of Brasília

(3) Department of Animal Health, Ministry of Agriculture, Livestock and Food Supply

(4) Bahia Plant and Animal Health Agency, SEAGRI

In order to support the planning and execution of the National Program of Control and Eradication of Bovine Brucellosis in the State of Bahia, a study to characterize the brucellosis epidemiological situation in the State was carried out in 2004. In this study, the State was divided into four production circuits, where 300 herds were randomly sampled in each of them, and 10 to 15 adult bovine females were sampled in each of these herds. A total of 10,816 serum samples from 1,413 herds were collected. The serum samples were screened for antibodies to *Brucella* sp. by the Rose-Bengal test (RBT), and all RBT-positive sera re-tested by the 2-mercaptoethanol test (2-ME) for confirmation. A herd was considered positive if at least one animal was positive on both RBT and 2-ME tests. The prevalence of infected herds and seropositive adult bovine females in Bahia State were 4.20% [3.10-5.30%] and 0.66% [0.41-0.93%], respectively. In the production circuits, the prevalence of infected herds and of animals were, respectively: circuit 1: 5.75% [3.64-8.71%] and 0.86% [0.41-1.32%]; circuit 2: 3.07% [1.48-5.56%] and 1.17% [0.25-2.09%]; circuit 3: 6.31% [4.05-9.33%] and 1.66% [0.66-2.66%], circuit 4: 0.60% [0.07-2.16%] and 0.07% [0.00-0.21%]. In each herd, an epidemiological questionnaire was applied. The risk factors associated with the presence of the infection were: purchase of breeding animals (OR = 2.27) and presence flood areas (OR= 1.76). Vaccination of heifers from three to eight months of age was a protective factor (OR=0,53).