DETECTION OF BRUCELLA ORGANISM IN URBAN HERDS OF JERSEY CROSSBRED COWS IN ASSAM (INDIA) BY BACTERIOLOGICAL AND ANTIBODY BASED TESTS

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ABSTRACT

Brucellosis is a deceptive infectious disease with serious economic implications in farm animals. The causative organism, Brucella abortus causes abortion, retention of placenta, and repeat breeding in cows. The clinical manifestations of the disease are not pathognomonic. Hence, diagnosis is primarily based on demonstration of brucella organisms in clinical samples by bacteriological examination or by serological test. However, the sensitivity and specificity of these tests are variable, and no single test can identify every infected cow. In this study, 51 clinical samples obtained from 16 Jersey crossbred cows with abortion and retained placenta in urban herds of cattle belonging to individual farmers of Khanapara, Guwahati, Assam (India) were examined for brucellosis by various diagnostic techniques. Brucella organisms were detected in 30 samples (58.82%) by i-FAT, in 30 samples (58.82%) by Brucella differential stain (BDS), and in 13 samples (25.49%) by s-ELISA. The organisms could be isolated in 7 (13.73%) samples. The detection rate was 100% from meconium, 90% from uterine discharge, and 87.5% from cotyledons of aborted foetus by i-FAT and BDS. The results of the present study reaffirm the suitability of BDS as a simple and speedy diagnostic technique for demonstrating Brucella organism in clinical samples.

KEYWORDS

Bovine brucellosis, Brucella Differential Staining, s-ELISA, i-FAT, Jersy crossbred cow

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