

Serological, Bacteriological, and Molecular Diagnosis of Brucellosis in Domestic Animals in Croatia

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Aim To present the surveillance data on *Brucella melitensis*, *B. suis*, and *B. ovis* infection in cattle, sheep, goats, and swine in Croatia obtained in 2008 by serological, bacteriological, and molecular methods for diagnostics of brucellosis in domestic animals.

Methods We serologically tested 42 785 cattle serums, 22 686 sheep and goat serums, and 28 520 swine serums using the Rose Bengal test, complement fixation test, and various immunosorbent assays. We also tested 10 173 ram blood samples for *B. ovis* infection using the complement fixation test. Bacteriological examination was conducted on 214 samples collected from 34 serologically positive animals. Different molecular methods were employed in the identification and typing of 20 isolates from the samples.

Results *B. melitensis* biovar (bv.) 3 was confirmed with different identification methods in 2 flocks in 2 Croatian counties and *B. suis* bv. 2 in 3 flocks in 3 counties. *B. melitensis* in cows was confirmed for the first time in Croatia. Infection with *B. ovis* was serologically confirmed in 202 rams in 12 counties.

Conclusions In 2008, the size of the brucellosis-affected area in Croatia and the efficiency of detection and prevention of brucellosis in sheep, goats, and swine were satisfactory. Infection with *B. melitensis* in cattle was confirmed for the first time and possible links for infection in humans were detected. More efficient measures for suppression and control of ovine epididymitis are required and a new strategy may be necessary for complete eradication of this disease.

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