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Interferon-γ assay, a high-sensitivity, specific and appropriate method for detection of bovine tuberculosis in cattle

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ABSTRACT

Bovine tuberculosis (TB) is an important zoonotic disease that is caused by *Mycobacterium bovis*. Eradication efforts in developed countries have reduced the prevalence of this disease significantly. TB can be difficult to diagnose based only on the clinical signs; therefore, it is usually diagnosed in the field with the tuberculin skin test and diagnostic blood tests, including the lymphocyte proliferation assay, the interferon (IFN)-γ assay, and enzyme-linked immunosorbent assay. The aim of this study was to compare the tuberculin and IFN-γ tests. A total of 110 animals were evaluated by tuberculin skin test (TST) and IFN-γ assay; the culture was selected as a gold standard. The animals were selected randomly from 700 cattle on dairy farms, aged 3–5 years and suspected of having TB. Ten cattle were positive using the TST and nine were positive by IFN-γ assay. All nine positive samples in the IFN-γ assay were positive in culture too. The observed errors in IFN-γ assay were less due to laboratorial tools. It is suggested that all positive samples in TST are also positive by IFN-γ too.

Conflicts of interest

The authors have no conflicts of interest to declare.

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