

**Assessment of the sensitivity and specificity of gamma-interferon test for the diagnosis of bovine tuberculosis and evaluation of its use in screening schemes in France**

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Bovine tuberculosis (bTB) is a bacterial disease mainly due to *Mycobacterium bovis*. It is characterized by a chronic evolution, polymorphic lesions and rare clinical signs. In France, in 1955, about 20% to 50% farms were infected. France was reported as 'officially bTB free' in 2001 by the European Commission, but few herd breakdowns are still being reported and complete eradication of bTB is uneasy to reach. In some French areas, disease re-emerged after a phase of apparent absence (Dordogne, Côte d'Or, Pyrénées Atlantiques, Seine-Maritime, Eure), or has never disappeared (Camargue). Furthermore, wild animals (deer, wild boar, badger) can be a source of infection for cattle. The principal screening test (i.e. the tuberculin test), is imperfect. The single tuberculin skin-test lacks specificity but is more sensitive than comparative tuberculin skin-test. This lack of specificity raises an issue over its diagnostic value as tuberculosis prevalence is low in most areas. In the last few years, new screening tests (gamma interferon, PCR) have been used in addition to conventional methods, in order to improve the quality of bTB diagnosis. These tests are already used in some French areas (Côte d'Or, Dordogne, Camargue) but they have not been fully evaluated yet. The aim of this study was to assess the diagnostic sensitivity and specificity of the gamma interferon test in different contexts and to evaluate the efficacy of its use in various screening schemes.