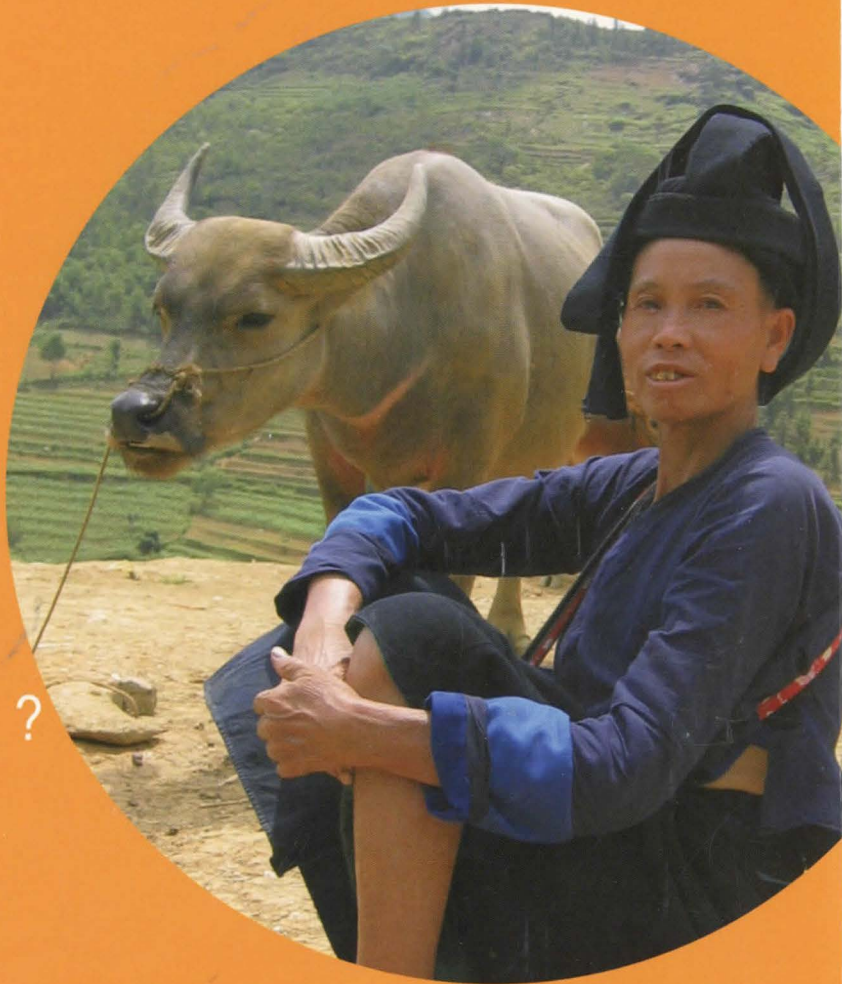


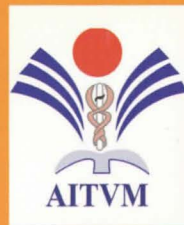
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EVALUATION OF TWO C-ELISA TESTS FOR DETECTION OF ANTIBODIES AGAINST PPR IN AFRICAN WILDLIFE

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ABSTRACT

Peste des petits ruminants (PPR) is a viral disease affecting both domestic and wild Artiodactyles. Its surveillance and control relies on the use of serological techniques like competitive ELISA. Here we evaluated the performance of c-ELISA-H and c-ELISA-N in wildlife species. We used data from 1244 serum samples obtained from individual animals within 13 African countries that were tested by both, ELISA and VNT (gold standard) in 144 cases. For the prescribed cut-off Sp and Se were estimated as 99.04% (95% CI = 96.19%-100%) and 10.24% (95% CI: 5.53%-16.35%) for c-ELISA-N and 22.72% (95% CI: 14.59-30.95%) and 98.15% (95% CI: 94.55-100%) for c-ELISA-H. ROC curves were obtained to identify cut-offs that would optimize the performance of the tests. New cut-offs were suggested : PI = 21.479 for ELISA-N and PI = 30.45 for c-ELISA-H with new Se and Sp estimates of 74.02% (95% CI: 66.39%-81.64%) and 56.60% (95% CI: 47.17%-66.04%) for c-ELISA-N and 55.54% (95% CI: 45.75%-65.12%) and 72.73% (95% CI: 60.96%-84.50%) for c-ELISA-H respectively. The apparent prevalences of PPR in the studied sites were corrected and 'true' prevalences ranging between 1.45% and 97.85% were obtained. Selection bias as well as lack of blinding were the main limitations of this study.

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