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EXPERIENCE WITH THE PRIOCHECK® TOXOPLASMA AB PORCINE ELISA TO ASSESS THE TOXOPLASMA INFECTION STATUS IN PIG HERDS

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Purpose

Among infections with zoonotic parasites, toxoplasmosis has the highest incidence in humans and represents a serious foodborne disease not only to immunocompromised, but also to immunocompetent people. According to European Food Safety Authority (EFSA), there is a need to implement surveillance and monitoring systems in the pre-harvest sector for pigs, sheep, goats and game. For that purpose, a new commercial ELISA for diagnosis of *Toxoplasma gondii* infection in pigs was evaluated and tested for performance.

Method

Serum samples from slaughter age pigs were collected at the abattoir and tested with the PrioCHECK® Toxoplasma Ab porcine. As reference tests, TgSAG1 immunoblot and IFAT were used. An experimental infection was performed with six piglets orally inoculated with 5,000 *T. gondii* oocysts and three piglets as negative controls. The pigs were bled at regular intervals and the samples tested with the PrioCHECK® Toxoplasma Ab porcine.

Results

Using 320 samples collected at slaughter, the PrioCHECK® Toxoplasma Ab porcine showed sensitivity and specificity of 98% and 99.6%, respectively, relative to the reference tests. A study on 499 samples from organic pigs revealed a relative sensitivity and specificity of 100% and 97.5%, respectively. In the experimental infection study, positive ELISA values were observed as early as two weeks after infection.

Conclusions

The results show that the PrioCHECK® Toxoplasma Ab porcine is a reliable and efficient tool to assess the *T. gondii* infection status of pig herds and can be included in control programs to reduce the infection burden in pig herds.

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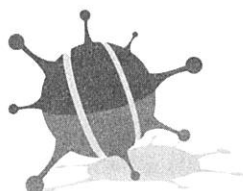
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