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In Vitro and *in Vivo* Efficacy of an Experimental Compound against *Rhipicephalus (Boophilus) microplus* Ticks

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ABSTRACT

The aim of the present study was to evaluate the ixodicide efficacy of the experimental compound 712-BF-016 against *Rhipicephalus* (*Boophilus*) *microplus* ticks *in vitro* and in cattle. The *in vitro* efficacy was initially tested against R. *Boophilus microplus* larvae using the Larval Packet Test (LPT). In a 2nd study the ixodicide efficacy was tested against adult ticks using the Adult Inmersion Test (AIT). Finally, a field test with the compound was carried out using 24 steers experimentally infested with *R.* (*Boophilus*) *microplus* ticks which were divided into 4 groups of 6 animals each for treatment. Groups 1 and 2 received the experimental compound at concentrations of 16% and 20%, respectively, which were applied as an aspersion in a total volume of 4 liters/animal. Group 3 was equally treated but with a commercial ixodicide containing cipermethrin at a 16% concentration. Group 4 served as untreated control. The efficacy was measured on days 1, 2, 3 after treatment as the percentage of ticks present from the treated groups, relative to the ticks present in the untreated control. The results indicated a percentage mortality of 93.21% for LPT and 98.02% for AIT. The efficacy produced in cattle was 61.78%, 76.43% and 85.34% for groups 1, 2 y 3, respectively. It is concluded that there was no concordance between the results obtained *in vitro* with those found in cattle. Possibly the excipient used for the formulation of the experimental compound was not suitable and had some influence on the results.

KEYWORDS

Rhipicephalus (Boophilus) microplus; Ixodicide; LPT; AIT; Cattle

Cite this paper

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