**Rhipicephalus microplus** RESISTANCE TO ACARICIDES IN CATTLE FROM THE INSTITUTO FEDERAL CATARINENSE – ARAQUARI/SC

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Diseases associated to cattle ticks (**Rhipicephalus microplus**) are spread worldwide, mainly in tropical and subtropical regions. Frequent use and incorrect utilization of chemical products for tick control have resulted in the selection of resistant parasite populations. The relative effectiveness of acaricides is determined by the adult immersion test (AIT), which employs a minimum of 10 engorged female ticks for each tested acaricide. Our goal was first to study the current resistance level of the *R. microplus* population in the cattle at the Instituto Federal Catarinense, located in the northeastern section of Santa Catarina State, in southern Brazil; thereafter, the determination of the genetic polymorphisms was associated to that resistance. We tested the efficiency of cypermethrin 0.1 mg/mL, amitraz 0.25 mg/mL and chlorpyrifos 0.5 mg/mL by AIT, in the tick population in dairy cows and calves. There was the control group and it was immersed in distilled water. We performed the assays on 50 female ticks from calves and 95 from cows for each chemical and control tested. After immersion, the females were dried and incubated at 28°C and 80% relative humidity for two weeks for laying eggs. Resistant ticks are considered as those, which were able to lay eggs, and susceptible ticks are those that do not lay or lay unviable or partly viable eggs. Our results displayed the average resistance as 26% for cypermethrin, 6% for amitraz and 12% for chlorpyrifos in calves. The assays in cows displayed 56% resistance for cypermethrin, 16% for amitraz and 17% for chlorpyrifos. The results displayed the *R. microplus* population are more resistant to cypermethrin in cows and calves. A considerable difference was observed in the resistance level related to cypermethrin among cows and calves, suggesting a polymorphic variation among the ticks population in different places on the same farm.

**Key words**: acaricides, *R.microplus*, and resistance.

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