Rhipicephalus microplus: Aguaribay, Lipia and Orange vapours effects on its reproduction

Matías Lapissonde[1], Ma. Silvia. Guala[2], Hugo Flores[2], Gustavo Pérez[2], Ma. Florencia Battistoni[3]

[1] Ministerio de la Producción de la Provincia de Santa Fe – Santa Fe - Argentina
[2] Facultad de Ingeniería Química – Universidad Nacional del Litoral – Santa Fe – Argentina
[3] Facultad de Ciencias Veterinarias – Universidad Nacional del Litoral – Esperanza - Argentina
mguala@fiq.unl.edu.ar

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In the bovine cattle, one of the greatest economic loss occurs because of the diseases caused by the common bovine tick, *Rhipicephalus microplus*. This has motivated the study of natural substances because they are less polluting than the synthetic products that are currently used. The objective of this work is to determine the effect on the reproduction of the tick in the presence of the vapors of the essential oils of aguaribay (*Schinus molle* L.), lipia (*Lippia alba* Mill. N. E. Brown ex Britton & Wilson) and orange (*Citrus aurantium*). The methodology used in the *in vitro* experiments is the immersion proof of adults (1).The technique was to wash and dry the engorged ticks collected from animals with natural infestation, to then select the most vital to carry out the test. They were weighed and placed in Petri dishes and distributed in 4 groups, one for each type of oil and one for witness, with 3 replicates for each group (12 boxes in total). Within the boxes are placed in the essential oil aluminum containers. For the control, it was use distilled water. The top of the box is drilled to allow the entry of air. The boxes were left on the bench at room temperature for 24 hours. After this time, the plates were incubated in the oven during 14 days, a period in which it is considered that all engorged ticks laid eggs. The eggs obtained were weighted and incubated in the oven during 25 days, a time that is considered that has finished the oviposition. The percentage of control was 28 % for the essential oil of aguaribay, 70 % for lipia oil and 40 % for the orange oil. It can be concluded that the vapours from these oils in different extent affect the reproduction of ticks, being the lipia essential oil that has the highest percentage of control.

1. Drummond, R.O. et al. Journal of Economic Entomology, 1973, **66**, 130-133.

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