Susceptibility of Boophilus microplus (Canestrini, 1887) (Acari: Ixodidae) to seven ixodicides in Nuevo Leon, Mexico

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Abstract

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Animal husbandry and meat industry in Mexico are one of the principal activities of the agricultural sector of the country, which are threatened by factors that affect the production of meat, skin and milk; among these, the damages caused by *Boophilus microplus* (Canestrini), the common tick of cattle, and the diseases it transmits, such as anaplasmosis and babesiosis (Xianxun and Wenshun, 1997; Yeruhan et al., 1998), are of special interest. The objective of this study was to determine the susceptibility of the larvae of *Boophilus microplus* to seven tick-killing agents commonly used in the state of Nuevo Leon. The methodology used for the diagnosis of the susceptibility of *B. microplus* tick to Organochlorine, Organophosphorate and Pyrethroid compounds was the one applied by Rodriguez-Vivas et al., (2007); in which it was used a discriminant dose (table 1), using the larvae package test technique (Stone & Haydock, 1962). The results of the CL_{50} to the ticks of cattle in the state of Nuevo Leon, Mexico showed a greater susceptibility to Deltamethrine, followed by Chlorfenvinphos; in third place Diazinon, then Flumethrin; after that Cypermethrin, in sixth place Lindane and a less toxicological action for the Coumaphos (Asuntol). The result was already expected due to the fact that it is the most commonly used product in the control of ticks through the larval immersion technique. The

Asuntol was used in the strain of El Bisonte Ranch of Montemorelos, Nuevo Leon, which is a homogeneous population and with certain short-time pressure could become resistant ticks.

key words: Rhipicephalus (Boophilus) microplus tick is susceptible to pesticides in the state of Nuevo Leon, Mexico.