

EVALUATION OF BIOLOGICAL AND RESIDUAL EFFICACY OF MICROENCAPSULATED PROPOXUR PAINT, WITH INESFLY TECHNOLOGY, ON *RHIPICEPHALUS SANGUINEUS* TICKS IN SEMI-CONTROLLED TESTS AND A FIELD TRIAL

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Abstract The reemergence of fever spotted by *Rickettsia rickettsii* associated with the *Rhipicephalus sanguineus* tick, represents a threat to the health of individuals and a public health problem in various locations in the state of Sonora, where more than 100 cases occur annually, with rates of specific lethality of 30% to 70% of the cases detected. For its control there are several strategies according to the stage of development of the vector, many of which are of high costs and of limited residuality. Given this, in 2017 we started semi-controlled tests under laboratory conditions to analyze the residual efficacy and efficacy of a microencapsulated propoxur paint with excellent results in the control of *Rhipicephalus sanguineus*, which encouraged and led to the performance of a community intervention trial in Miguel Aleman Town, located in the municipality of Hermosillo, one of the most affected by this disease and with the highest lethality rates (70%). The evaluation of the effects of Microencapsulated Propoxur Paint in both phases of the study yield the following results: - A higher residual mortality is achieved with the microencapsulated paint with propoxur than that achieved with wettable powders when applied to analyzed substrates;- The use of microencapsulated propoxur paint in residential interiors was associated with better levels of entomological and epidemiological protection than that generated with the use of wettable powders in residential interiors, or that generated by the use of preventive measures usually developed by state health services.

Key words Rickettsiosis, tick control, Rickettsiosis spotted fever