PO1.51

In Vitro Efficacy of Commercial Isolates from Plants on Rhipicephalus (boophilus) microplus

Chagas, Ana Carolina Souza[1]; Oliveira, Marcia Sena[1]; Georgetti, Cynthia[2]; Ferrenzini, Jenifer [2]; Freitas, Alfredo Ribeiro[1]

1. Embrapa Pecuária Sudeste, São Carlos, Brazil; 2. UNICEP, São Carlos, Brazil

Commercial isolates from plants have potential use to control R. microplus. This study investigated the action of isolates on engorged females and larvae of R. microplus. The females were immersed for five minutes in the substances and incubated (± 28°C and humidity of 80%) for subsequent analysis of the biological parameters. The larvae were tested by the impregnated paper method, with reading after 24h of incubation. The isolates tested with three repetitions were citral (95% pure, Aldrich®), citronelal (85% pure, Dierberger®), geranyl acetate (97% pure, Fluka®), R-(+)-limonene (98% pure, Fluka®) and terpinolene (85% pure, Fluka®). The control was distilled water with 2% of tween. The substances were evaluated on the females, at the following concentrations: 0.31%, 0.63%, 1.25%, 2.5% and 5%. The mean efficacy of these respective concentrations was, for citral: 14%, 0%, 0%, 16% and 30%; citronelal: 10%, 11%, 0%, 9% and 0%; geranyl acetate: 0%, 12%, 0%, 7% and 0%; limonene: 0%, 0%, 6%, 47% and 11%; and terpinolene: 4%, 0%, 10%, 6% and 28%. The substances were tested on the larvae at concentrations of 0.63%, 1.25%, 2.5%, 5% and 10%. The mean efficiency of these concentrations allowed calculating the LC50 and LC99 by the Probit procedure, which were, respectively 0.4% and 1.2% for citral, 1.1% and 3.3% for citronelal, 0.8% and 25.3% for geranyl acetate, 5.2% and 32.3% for limonene and 3.5% and 9.9% for terpinolene. These results indicate that the association of citral with a synthetic active could increase the efficacy against larvae of R. microplus.