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CONTROL OF *PERIPLANETA AMERICANA* AND *BLATTELLA GERMANICA* OOTHECAE USING CHEMICAL AND BIOLOGICAL INSECTICIDES

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Abstract *Periplaneta americana* and *Blattella germanica* are pests of great importance in urban areas, mainly due to their role as vectors of pathogens and capability of causing allergies. The interspecific differences between these cockroaches can lead to different results in their control. No chemical (liquid/powder application) or biological products have been successful in controlling pre-embryonic stages of cockroaches and little is known about their residual effect on nymph eclosion. The objective of this study was to analyze the potential of different synthetic chemical insecticides and entomopathogenic fungi in controlling oothecae of *P. americana* and *B. germanica.* Two experiments were conducted with the objective of determining nymphal mortality. First, the oothecae of *B. germanica* and *P. americana* were submitted to the following treatments: T1 – control, T2 – indoxacarb (0.03g/10mL) T3 –fipronil (62µL/10mL), T4 – lambda cyhalotrin (63µL/10mL) T5 – imidacloprid (31.70µL/10mL) and T6 – imidacloprid + β-cyfluthrin (21µL/10mL); and then the percentage of dead oothecae, the total number of nymphs eclosed and dead nymphs were compared. In the second bioassay, the same variables were analyzed after submitting oothecae to the following treatments: T1 – control, T2 – deltamethrin 0.05% (0.037g/0.015m^2), T3 – thyme oil 4.1% (0.046g/0.015m^2), T4 –imidacloprid + β-cyfluthrin 0.075% (1.22mL/0,015m^2), T5 – isolate 428 of *Beauveria bassiana* (2.6 x 10^8 conidia/0.015m^2) and T6 – isolate 2575 of *Metarhizium anisopliae* (1.7 x 10^8 conidia/0.015m^2). Each treatment consisted of 50 oothecae with 5 repetitions. Data were compiled and subjected to analysis of variance by the F test in a factorial (6 treatments X 2 cockroaches) and the means compared by the Tukey test ($p \leq 0.05$). *M. anisopliae* was the most effective strategy to control oothecae of both cockroach species. The chemical active ingredients fipronil, lambda cyhalothrin, deltamethrin and imidacloprid + β-cyfluthrin were most effective in controlling nymphs of these cockroach species.