

CONTROL OF TWO POPULATIONS OF *PERIPLANETA AMERICANA* BY SPRAYING CHEMICAL AND BIOLOGICAL INSECTICIDES IN URBAN SEWAGE

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Abstract The applicability of entomopathogenic fungi for *Periplaneta americana*'s control in urban sewage is still not well studied, even though its importance as an urban pest capable of disease dissemination being a constant. Females have an important role on dissemination of the species due to their oviposition capability and yet majority of researches focus on male control. The objective of this work was to verify the efficiency and viability of *Metarhizium anisopliae* and *Beauveria bassiana* fungi isolates applied by cold spraying on the control of two populations of *P. americana* females in urban sewage in comparison to chemical control. Twenty sewage galleries in Jaboticabal, Brazil and in Piracicaba, Brazil were used for the following treatments: T1- control (no application), T2 - Tween 80[®] 0.1% solution (suspension vehicle), T3- 3×10^8 conidia/mL suspension of JAB68 of *M. anisopliae*, T4- 3×10^8 conidia/mL suspension of IBCB35 of *B. bassiana*, T5- Insecticide with lambda cyhalothrin (2.5%) with recommended concentration (10mL/L). The applications were conducted by spraying a volume of 373.3 mL/m³ with cold-air nozzle sprayer AT1000 and it was evaluated: total mortality, mortality by fungus, extrusion, time of death by the fungus and fungi viability before and after application. It was found that the isolate JAB 68 of *M. anisopliae* is more effective in controlling *P. americana* females in urban sewage when compared to IBCB35 of *B. bassiana*, and it doesn't differ from chemical control after second application. Conidia of this fungus are still viable after fogging, with 97% viability.