

ISOLATION OF ENTOMOPATHOGENIC FUNGI FROM AGRICULTURAL SOIL AND NATIVE FOREST FOR BIOLOGICAL CONTROL OF *Duponchelia fovealis* (LEPIDOPTERA: CRAMBIDAE)

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The strawberry is one of the species cultivated with greater susceptibility to pests and diseases, which requires a continuous effort of management, especially phytosanitary, so the fruit has the appropriate look and quality for commercialization. Among the insects that reduce production and quality of strawberry, the moth *Duponchelia fovealis* (Lepidoptera: Crambidae) must be highlighted. Nowadays, management of this pest is being done with highly toxic insecticides, and the use of biological control agents arises as an alternative to chemical pesticides in agriculture, with benefits to consumers, farmers and the environment. Entomopathogenic fungi are natural enemies of plagues in agro ecosystems, and play an important role in natural regulation of insects, developing severe animal diseases that lead to rapid decline of populations. So, the aim of this work was to isolate and identify new strains of entomopathogenic fungi belonging to genera *Beauveria*, *Metarhizium* and *Lecanicillium* from agricultural soil and native forest soil in three cities in Paraná, Brazil. It was collected 250 samples of soil in 5 different agricultural areas in Araucaria, 8 areas in a conservation unit in Morretes, and 2 areas in Lapa, one agricultural and one of native forest. Samples were diluted in saline solution 0.85% with chloramphenicol 0.4 g.mL<sup>-1</sup>, and an aliquot of 100 µL were dispensed in Petri dishes with Niger Agar medium supplemented with tetracycline 0.05 g.mL<sup>-1</sup>, streptomycin 0.6 g.mL<sup>-1</sup>, dodine 0.1 g.mL<sup>-1</sup> and cyclohexamide 0.05 g.mL<sup>-1</sup>, and incubated at 28±0.5°C for 21 days in B.O.D. incubator without luminosity. Fungi of interest were transferred to Sabouraud Agar medium and identified using macro and micromorphology, followed by DNA sequencing of ITS region and partial beta-tubulin gene. So far, about 68% of the isolates were obtained from agricultural areas. Seven isolates were identified as *Beauveria bassiana*, one as *Lecanicillium* sp., and eight belong to genera *Metarhizium*, four of them identified as *M. anisopliae*. This work will continue with selection of isolates through pathogenicity tests against 4<sup>o</sup> instar *D. fovealis* moths to identify a possible biological control product.

Key words: biological control, *Duponchelia fovealis*, entomopathogenic fungi