TITLE: INSECTICIDAL ACTIVITY OF ENTOMOPATHOGENIC FUNGI EXTRACTS AGAINST *Duponchelia fovealis* (LEPIDOPTERA: CRAMBIDAE) EGGS

AUTHORS: POITEVIN, C.G.; PORSANI, M.V.; AMATUZZI, R.F.; POLTRONIERI, A.S.; ZAWADNEAK, M.A.C.; PIMENTEL, I.C.

INSTITUTION: UNIVERSIDADE FEDERAL DO PARANÁ, CURITIBA, PARANÁ, BRAZIL

ABSTRACT:
Duponchelia fovealis (Lepidoptera: Crambidae) is a polyphagous pest present in Europe, Asia, Africa and North America. It was identified in Brazil for the first time in strawberry fields in 2010 in Paraná, and spread fast to other producing regions. Due to the infestations throughout the year and the damage caused by the larvae, unauthorized chemical insecticides have been used indiscriminately. Thus, biological control with entomopathogenic fungi is an alternative to be considered in integrated management, since they produce different compounds which affect insect hosts. Hence, the objective of this work was to evaluate the insecticidal activity of entomopathogenic fungi extracts in egg hatching of *D. fovealis*. Isolates from soil belonging to genus *Beauveria*, *Metarhizium* and *Paecilomyces* with known potential against *D. fovealis* were cultivated in Adamek's liquid medium in shaker for 7 days at 27ºC, then filtered to remove cells and lyophilized. Adult insects were kept in cages in laboratory under controlled conditions of 25°C, 70% relative humidity and 14-hour photophase, and fed on artificial diet. Pieces of paper with ten 24-h old eggs were soaked in fungal extracts at the concentration of 15 $mg.mL^{-1}$, put individually in moistened Petri dishes and incubated in BOD at 25°C, 70% relative humidity and 12-hour photophase. Non-cultivated Adamek's medium and distilled water were used as control. Hatching evaluation occurred after 7 days. The experiment was entirely randomized, with 10 replicates with 10 eggs each. Extracts from *Beauveria bassiana* isolates showed higher hatching inhibition, up to 24%. Despite the low mortality results, this work showed possible sublethal effects during larval development. Further studies will focus on elucidating these effects in larval biology.

Keywords: biological control, *Beauveria bassiana*, hatching inhibition.

Development Agency: CNPq