Pathogenicity of *Beauveria bassiana* and *Metarhizium anisopliae* on larvae and adults of the codling moth *Cydia pomonella*.

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The codling moth is the key apple pest in Chile and elsewhere. Growers spray up to fourteen times to control this pest, although the most common programme includes 6-8 sprayings per season. We carried out laboratory and field experiments to select *Beauveria bassiana* and/or *Metarhizium anisopliae* pathogenic to this pest. First, *C. pomonella* fifth instar larvae were immersed in a water suspension of spores. In the following fifteen days, mortality was recorded and two strains, *M. anisopliae* Qu-M44T2 and *M. anisopliae* QU-M566 were selected to the next step, because they caused >50% of mortality. Then, fifth instar larvae were exposed to increasing concentrations of spores, from 1 x 10⁵ to 1 x 10⁷ spores/mL. Lethal concentrations for the 50 and 90% of the exposed larvae were calculated (LC５₀ and LC₉₀) and the strains did not differ in their (LC₅₀ and LC₉₀) (P>0.05). Finally, we evaluated the persistence of the spores in apple foliage. The trees (five trees per strain, pyrethroid and control treatments) were sprayed once in summer and leaves were collected at 0, 24, 48 and 72 hours after spraying. In the laboratory, neonate larvae of *C. pomonella* were allowed to walk for five seconds over the leaves and then transferred to artificial diet for rearing. After ten days, the diet was examined and the number of alive larvae recorded. At time zero, the mortality was 40% and 37% for Qu-M44T2 and QU-M566 strains, respectively, while the pyrethroid caused 76% of mortality. The insecticde showed the same efficacy at time 24 and begun to decrease at times 24 and 48. Both strains showed less than 10% mortality at time 24 and following. As the spores were sprayed on water, a desiccation and UV protectant is needed to improve their field performance.

**Palavras-chave:** inundative biological control, apple pest, persistence.

**Apoio:** (se houver)