Pathogenicity of three entomopathogenic fungi against different stages of the Mediterranean fruit fly *Ceratitis capitata*

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The objective of this study is to determine the pathogenicity of three entomopathogenic fungi *Beauveria bassiana*, *Lecanicillium muscarium* and *Paecilomyces fumosoroseus* to eggs, old larvae and adults of *C. capitata* under laboratory conditions.

All the fungi were pathogen to the emerged flies (3×10^6 conidia/cm²; 25°C and 70% R.H). After 14 days 66% of flies were dead through *L. muscarium* and 74% *B. bassiana.* The lowest mortality of 49% caused *P. fumosoroseus* in comparison to the control with 13%. In case of *L. muscarium* about 63% of dead flies were moulded. The mouldiness was high (85%) by *B. bassiana* and low (20%) by *P. fumosoroseus*.
The old larvae were average sensitive to the entomopathogenic fungi. After treatment with *L. muscarium* and *B. bassiana* ($2x10^6$ sp/cm²) the emergence of adults was reduced to 46% or 44% respectively in comparison to the control with 74%.

The eggs were not susceptible and the emerged larvae form the treated eggs were not infected and could develop to pupae. *P. fumosoroseus* caused the highest mortality (32%) among the fungi.

These results indicate that *B. bassiana* and *L. muscarium* were high pathogen to adult stage and have a middle pathogenicity to the larval stage of *C. capitata*.

Key words: Pathogenicity, entomopathogenic fungi, Mediterranean fruit fly, *Ceratitis capitata, Beauveria bassiana*, *Lecanicillium muscarium* and *Paecilomyces fumosoroseus*