

Enhanced Activity of *Beauveria bassiana* to Red Imported Fire Ant Workers (Hymenoptera: Formicidae) Infected with *Thelohania solenopsae*¹

Mark A. Brinkman and Wayne A. Gardner

Department of Entomology, University of Georgia
College of Agricultural and Environmental Sciences
Griffin Campus, 1109 Experiment Street
Griffin, Georgia 30223

J. Agric. Urban Entomol. 17(4): 191–195 (October 2000)

ABSTRACT A range of concentrations of *Beauveria bassiana* (Balsamo) Vuillemin conidia was tested against red imported fire ant, *Solenopsis invicta* Buren, workers from colonies infected with the microsporidian, *Thelohania solenopsae* Knell, Allen, and Hazard, and on workers from healthy colonies. Median lethal concentrations (LC₅₀) of *B. bassiana* in healthy and microsporidian-infected colonies showed that fire ants from infected colonies were more susceptible to *B. bassiana* infection than ants from healthy colonies. The LC₅₀ of *B. bassiana* in microsporidian-infected workers was 4.5X less than that of healthy colonies. Mortality of ants from *T. solenopsae*-infected colonies that were treated with 9.66×10^6 *B. bassiana* colony forming units per cm² was subadditive compared to either pathogen alone.

KEY WORDS *Beauveria bassiana*, Hyphomycetes, Moniliales, *Thelohania solenopsae*, Microsporida, Thelohaniidae, *Solenopsis invicta*

¹Accepted for publication 8 November 2000.