

Title Effects of different biological formulations of *Penicillium frequentans* on brown rot of peaches
Author B. Guijarro, P. Melgarejo, R. Torres, N. Lamarca, J. Usall and A. De Cal
Citation Biological Control, Volume 42, Issue 1, July 2007, Pages 86-96
Keywords Biocontrol; Formulation; *Monilinia laxa*; *M. fructigena*; *M. fructicola*; *Penicillium frequentans*; Peach; Postharvest; *Prunus persica*

Abstract

Four wettable powder formulations of *Penicillium frequentans* conidia with measurable viability of one year and an improved adherence to peach surfaces were produced by the addition of various ingredients, in two separate steps of the production and drying processes, to conidia. These formulations were then evaluated against brown rot of peach fruit caused by *Monilinia* spp. Formulations were applied to fruit either as postharvest treatments or before harvest in field treatments to peach trees. In the case of postharvest treatments to fruit, reductions of brown rot were obtained with all *P. frequentans* formulations. Treatments applied before harvest were tested in six field experiments in peach orchards in Spain. A total of 100 fruits, randomly selected in each orchard, were used as the sample unit and every treatment was repeated four times. Results showed that *P. frequentans* formulations significantly reduced the inoculum density of the pathogen (measured as the number of conidia on peach surface) in five trials out of the six tested, better than a chemical fungicide that only showed a reduction of the pathogen conidial in two of the six trials. The relationship between the number of conidia of the pathogen and the incidence of brown rot disease is discussed.