

Abstract

Cryptococcus laurentii was evaluated for its activity in reducing postharvest gray mold decay of pear caused by *Botrytis cinerea*. Washed cell suspensions of yeast controlled gray mold better than yeast in culture broth. Treatment of wounds with autoclaved cell cultures or cell-free culture filtrate did not prevent decay. The interval between inoculation with the pathogen and application of the antagonist significantly influenced the efficacy of biocontrol. Efficacy was maintained when *C. laurentii* was applied simultaneously or prior to inoculation with *B. cinerea* but reduced if applied after inoculation with *B. cinerea*. The concentrations of antagonist had significant effects on biocontrol effectiveness: the higher the concentrations of the antagonist, the lower the disease incidence and the smaller the lesion diameter regardless of whether the fruit was stored at 25 °C for 7 days or 2 °C for 30 days followed by 20 °C for 7 days. The efficacy of *C. laurentii* was enhanced by the addition of 2% CaCl₂. *C. laurentii* significantly reduced the natural development of decay and did not impair quality parameters of fruit following storage at 2 °C for 60 days followed by 20 °C for 15 days.