

Title Improved control of postharvest blue mold rot in pear fruit by a combination of *Cryptococcus laurentii* and gibberellic acid

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Abstract

Gibberellic acid (GA₃) is associated with fruit ripening and senescence. In this study, we investigated the feasibility of GA₃ to improve the efficacy of *Cryptococcus laurentii* in controlling postharvest blue mold rot caused by *Penicillium expansum* in pear fruit. Although GA₃ alone was not found to have any influence on *P. expansum* or *C. laurentii* *in vivo* and *in vitro*, the combination of *C. laurentii* and GA₃ at 2000 µg per ml resulted in a more efficient control of blue mold rot in pear wounds *C. laurentii* alone, with the associated rapid increase in peroxidase and polyphenol oxidase activities and with an inhibition of lipoxygenase activity and lipid peroxidation. In addition, no phytotoxic injury was observed in fruit tissue treated with GA₃ at 2000 µg per ml. The results from this investigation enabled us to find a new way to improve the performance of *C. laurentii*.