

Title Biological control of postharvest diseases with *Bacillus subtilis* (B1 strain) on muskmelons (*Cucumis melo* L. cv. Yindi)

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Abstract

The biocontrol capability of *Bacillus subtilis* (B1 strain) against major postharvest diseases of melons was studied in vivo. B1 unwashed cell culture significantly inhibited disease incidence and lesion area of fruit inoculated with *Alternaria alternata*, *Fusarium semitectum*, *Rhizopus stolonifer* and *Trichothecium roseum*, respectively. B1 culture filtrate, autoclaved culture and cell suspension had less control effect than that of unwashed cell culture. Higher concentrations of B1 were more effective against the disease caused by *F. semitectum* and *T. roseum*. B1 treatment before 48 h of inoculation with *T. roseum* showed the best control efficacy.