

Title Biological control of *Penicillium digitatum* on oranges using *Pseudomonas* spp. either alone or in combination with hot sodium bicarbonate dipping

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Abstract

Epiphytic fluorescent isolates of the genus *Pseudomonas* (277), cultured from the fruit and leaf surfaces of citrus, were screened for antagonistic activity against green mould caused by *Penicillium digitatum*. Three of the *Pseudomonas* isolates showed greater activity than others against the pathogen in preliminary screening tests and were selected for subsequent experiments. *Pseudomonas* isolates were evaluated alone and in combination with 24 and 45°C sodium bicarbonate (3%) treatments on artificially inoculated Thomson navel oranges. The *Pseudomonas* isolates were completely tolerant to sodium bicarbonate up to a concentration of 3%. In addition, their efficacy for controlling green mould was improved when combined with the 3% sodium bicarbonate. A further increase in biocontrol activity was obtained when the bacterial isolates were applied in combination with hot sodium bicarbonate. It was concluded that using the fluorescent *Pseudomonas* spp. isolates in combination with a treatment of hot sodium bicarbonate could provide a practical alternative or complement to fungicides for postharvest control of green mould on oranges.

<http://www.springerlink.com/content/r335201753701381/fulltext.pdf>