

### **Abstract**

The potential of citrus fruit curing for the control of green mold caused by *Penicillium digitatum*, and the impact of this treatment on stem-end rot caused by *Lasiodiplodia theobromae* were investigated. The optimum temperatures for mycelial growth of *P. digitatum* and *L. theobromae* were about 25 and 30°C, respectively. *P. digitatum* did not grow at 35°C, while *L. theobromae* did. Injuries of 'Valencia' oranges developed less green mold disease at 30 and 35°C than at 25°C or lower. Green mold incidences on 'Valencia' oranges treated at 21°C (uncured control), 30 and 35°C for 48 h were 51, 17.4, and 0%, respectively, for inoculated fruit, and 18.8, 11.4, and 0%, respectively, for wounded fruit after 2 weeks of storage at 21°C. However, a significant increase in stem-end rot occurred at 35°C when compared with 21°C (uncured control). In two of three different tests, curing fruit at 35°C for 48 h achieved better green mold control than a shorter curing time of 24 h. Curing 'Pineapple' oranges showed a similar or better efficacy for green mold control than imazalil at 500 and 1,000 ppm applied by either dip or packingline drip. The combination of thiabendazole drench (500 ppm) and curing of wounded 'Valencia' oranges and inoculated 'Flame' grapefruit reduced both green mold and stem-end rot by more than 93%. This study suggests that curing (35°C for 48 h) could be integrated into the current Florida citrus packing system to effectively control postharvest decays.