

Abstract

The combination of calcium infiltration of 'Gala' apples, followed by inoculation with the bacterial antagonist *Pseudomonas syringae* and then *Penicillium expansum*, was the most effective treatment combination in reducing decay on fruit stored for 3 months at 1 C. Heat treatment (38 C for 4 days) after inoculation with *P. expansum*, which had been beneficial the previous year, exacerbated decay when used alone or in combination with calcium infiltration or the antagonist on fruit inoculated at harvest and rated for decay after 3 months in storage. This possibly occurred due to over-maturity of the fruit at the time of treatment. Heat treatment of a parallel lot of fruit after wounding, but prior to inoculation with the pathogen, alone or in combination with the antagonist, resulted in excellent control due to the potential wound healing effect of the heat. Combining heat treatment with antagonists is being further investigated to control postharvest apple decay.