

### **Abstract**

The effect of sodium silicate (Si) for control of decay was tested in Hami melons (*Cucumis melo* L. var. *inodorus* Jacq.). Si significantly inhibited mycelial growth of *Alternaria alternata*, *Fusarium semitectum*, and *Trichothecium roseum* in vitro. Si at 100 mM was more effective than Si at 25 or 50 mM at controlling the diseases caused by the three pathogens, whereas Si at 200 mM was phytotoxic. Si treatments applied at 100 mM pre-inoculation with *T. roseum* had lower decay incidence and severity than treatments applied post-inoculation. The protection of Si was correlated with the activation of two families of defense-related enzymes, peroxidase and chitinase. Accumulation of both enzymes was induced in fruit treated with Si and challenged by *T. roseum* 24 h later, and was sustained for at least 9 days in 'New Queen' and 10 days in '8601' at room temperature. It appeared that induced resistance was an important mechanism of disease control in Hami melons treated with Si.