Title GRAS (Generally Recognized As Safe) methods as a possible control of postharvest fungal diseases in sweet cherry

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Abstract

Sweet cherry is a fruit with a very limited storage life and fungal decay during shelf-life can often result in serious fruit loss. In Germany, there are no postharvest treatments allowed to control fungal diseases on sweet cherries. However, internationally interest is increasing in alternative methods that are harmless to consumer health. We tested different GRAS (Generally Recognized As Safe) methods to control *Penicillium expansum* (blue mould rot), *Botrytis cinerea* (gray mould rot) and *Monilinia fructigena* (brown rot) on sweet cherry in 2007 and 2008. Comparing the different GRAS methods, a combination of sodium bicarbonate ($NaHCO_3$) and yeast (*Aurebasidium pullulans*), a product marketed as Antinfek™10H (polyhexamethylene biguanidine hydrochloride 3.2% w/w), a combination of Antinfek™ with Serenade Max (*Bacillus subtilis*), and Antinfek™ with calcium hydroxide, all showed good results in reducing postharvest fungal diseases. Other GRAS methods, such as citric acid, calcium formate, Na-metasilicate, chitosan, or yeast separately did not show adequate control against the tested fungi. Further GRAS research to control postharvest diseases in sweet cherry is planned.