

Title Comparison of susceptibility to postharvest rots of 'Conference' pears produced organically and conventionally

Author M. Suleiman, D. Rees and J. Orchard

Citation ISHS Acta Horticulturae 858:251-254. 2010.

Keyword pear; organic; postharvest; rots; *Monilinia*; *Penicillium*

Abstract

Given the increasing importance of organic produce, a study was carried out to find out how organic production methods affect postharvest and storage quality of 'Conference' pears (*Pyrus communis*). When fruit were taken out of cold storage and artificially infected either with *Monilinia fructigena* or *Penicillium expansum* disease development was significantly slower in organic pears than in conventional pears. The effects were more marked for *M. fructigena* which is the more aggressive pathogen (about 20% inhibition of lesion growth rate), compared with a smaller, but significant effect on *P. expansum* (5-10% inhibition of lesion growth rate). Organic pears had higher dry matter content (15.6% compared with 14.7%) and were firmer than conventionally-produced fruit, which may affect the rate of pathogen growth. Analysis of total phenols indicated an increase induced by infection by either pathogen, but no significant differences either before or after infection between organically and conventionally-produced pears.