

Title Effects of AVG on harvest date, storage and economic return of 'conference' pear
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Abstract

AVG (aminoethoxyvinylglycine) has the potential to retard ethylene biosynthesis and ripening processes in apple and it is used as a practical tool to prolong the harvest period without negative influence on postharvest fruit quality or storage. The question was whether a delayed harvest date after AVG application had any influence on 'Conference' pear fruit quality characteristics, storability and economic return. An experiment with 'Conference' pears treated with AVG (ReTain®, Valent BioSciences Corp.) was performed in 2007 mainly to evaluate the incidence of storage disorders which normally increase when harvest is delayed. The harvest dates differed by 7 days between the control and AVG-treated pears. In addition, some control pears were harvested at the same late harvest timing as the AVG treated pears to examine the effect of a delayed harvest on browning disorders. Fruit size of late harvest pears (treated and untreated) was improved and the yield per tree was increased. As a result the financial returns of AVG treated and untreated late harvested pears were substantially increased. The other quality and ripening parameters were not influenced. However, the incidence of browning disorders in ReTain® treated, late harvest and CA-stored 'Conference' pears increased by about 8% in comparison to the early harvested control when the pears were stored in a more critical CA atmosphere (3% CO₂ + 2% O₂). However, when the pears were stored in a low CO₂ atmosphere (0.8% CO₂+ 2% O₂) that is normally applied for CA-storage of 'Conference' pears; no browning disorders appeared in the late harvested fruit.