

**Title** Preharvest aminoethoxyvinylglycine treatments reduce internal browning and prolong the shelf-life of early ripening pears

**Author** Salvatore D'Aquino, Mario Schirra, Maria Giovanna Molinu, Marco Tedde and Amedeo Palma

**Citation** Scientia Horticulturae, Volume 125, Issue 3, 28 June 2010, Pages 353-360

**Keywords** Aminoethoxyvinylglycine (AVG); Internal browning; Color; Decay; Early season pear; Ethylene; Respiration; Ripening

### **Abstract**

The effect of aminoethoxyvinylglycine (AVG) on internal browning (IB) and keeping quality of early maturing European pears cv 'Camusina di Genova' and 'Camusina di Bonarcado' was examined over 10 days of storage at 18 °C. AVG was applied at 125 or 250 mg/L 2 weeks before harvest. At harvest fruit treated with AVG was less ripe than control fruit, being significantly firmer and experiencing lower values of maturity stage (based on ground color), maturity index (calculated value) and IB, depending on the AVG dose and cultivar. During storage, there was no treatment-dependent difference in titratable acidity and total soluble solids of juice, while both treatments reduced ethylene and respiration rates, delayed the ripening process and lowered the incidence of IB and the loss of firmness, especially when applied at 250 mg/L. In addition, AVG treatment significantly reduced decay development in both cultivars, mainly when it was applied at 250 mg/L. This effect was related to the delay of ripen and to possible inhibition of ethylene production by the pathogens and/or infected tissues.