

Title           Aminoethoxyvinylglycine treatment of peach fruit reduces ethylene production and softening.  
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### **Abstract**

'Biscoe' and 'Encore' peach [*Prunus persica* (L.) Batsch] trees were treated in two years with AVG at 7, 14, or 21 days before first harvest (DBFH) or as a nontreated control (NTC). Fruit were harvested every 2 to 3 days based on observed initial yielding of fruit flesh and ground color. Fruit were further evaluated for maturity and quality based on the production of ethylene, ground color, diameter, flesh firmness, soluble sugars, and woolliness. Evaluations occurred 1 day after harvest and after 14 and 28 days in cold storage. AVG applications delayed early harvests of 'Biscoe', but 'Encore' harvests were not affected. Across all preharvest treatment timings, AVG reduced ethylene production by 64%. Ethylene production and fruit softening were most inhibited for fruit treated with AVG 7 DBFH. In this study, fruit treated with AVG demonstrated a significant negative correlation between fruit ethylene production and firmness. Average flesh firmness of fruit from AVG treatments were 11.8 Newtons greater than NTC fruit. Fruit treated 21 or 14 DBFH exhibited greener ground color than NTC fruit or fruit treated 7 DBFH. The NTC fruit had the highest ground color values, fruit treated 7 DBFH were intermediate, and fruit treated 21 or 14 DBFH had the lowest values for ground color. AVG has potential use as a management tool for controlling the timing of harvest and for allowing fruit to ripen more slowly and to hang longer on the tree, thus improving fruit size. In addition, AVG assists in maintaining the postharvest flesh firmness required to withstand handling during marketing. Chemical name used: aminoethoxyvinylglycine (AVG).