ETHYLENE AND PISTILLATE FLOWER ABORTION OF WALNUT

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Walnut (*Juglans regia*) may be affected by abortion of pistillate flowers shortly after bloom. The resulting loss of pistillate flowers can be the most significant factor limiting productivity in the most susceptible cultivars. High pollen loads induce the abortion of pistillate flowers. Within 24hr of pollination the pistillate flowers show a burst of ethylene production. The level of ethylene produced is highest in the most susceptible cultivars. Applications of inhibitors of ethylene synthesis and ethylene reception can reduce the incidence of pistillate flower abortion.

We will report results of field experiments using aminoethoxyvinyl-glycine (ReTain®, Valent Biosciences) and 1-Methylcyclopropene (SmartFresh®, Agrofresh, Inc.) to control pistillate flower abortion in walnut orchards.

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