

†EFFECTIVENESS OF RETAIN® ON PISTILLATE FLOWER ABORTION
AND ETHYLENE PRODUCTION OF WALNUT FLOWERS

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Pistillate flower abortion (PFA) of walnut (*Juglans regia*) is the loss of female flowers shortly after bloom, prior to fruit set. PFA is associated with high pollen load and can be especially severe in cv. Serr. Ethylene production following pollination is greater in cultivars that are more susceptible to PFA.

A peak in ethylene production, associated with pollination, occurred approximately 18-24 hours after pollination in excised flowers. Aminoethoxy-vinylglycine, applied as ReTain® (Valent Biosciences), decreased ethylene production in both pollinated and non-pollinated flowers. The decrease was correlated to the concentration applied. In the field, early sprays of ReTain decreased PFA in 'Serr' walnut compared to the untreated control. Late applications of ReTain® had no effect. PFA can greatly reduce yield in an orchard, but ethylene inhibitors may help alleviate the problem.