

# Retain Basics

Retain must be applied before the climacteric of the apple, i.e., the beginning of ethylene production. Earlier is acceptable, later is failure.

Retain must penetrate the apple to be effective. The better the surfactant and the slower the drying time the more effect you can expect. Pineolene stickers (Nufilm) will provide nearly identical results through harvest as the silicones but will not extend benefits as long in storage as the silicone surfactant.

Use sufficient spray volume to thoroughly wet the target area with a minimum of drip. Retain is not systemic as NAA is, it must be applied directly to the apple. This characteristic can be employed to selectively treat the early ripening upper part of the tree while skipping the lower portion to compress the harvest period of varieties such as Gala.

Half rates of Retain have been used successfully to delay water core development in Red Delicious with only a minimum delay in color development and harvest dates.

Half rates of Retain applied to the upper half to two-thirds of the canopy has successfully been used to reduce Gala harvest from three and four pickings to two pickings. Color delay was minimal; stem end splitting was also reduced.

Retain normally replaces NAA as a pre-harvest stop drop. If harvest is delayed more than 2 weeks beyond the target date the stop drop effect may dissipate requiring supplemental applications of NAA.

Full rate is one pouch plus preferred surfactant per acre in sufficient volume to thoroughly wet the fruit and foliage. Adjust accordingly if partial rates are desired.