

Implementation Programs

Parker Areawide Codling Moth Suppression Pilot Project

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The Parker project consists of approximately 500 acres of apple and pear in which growers agreed to uniformly use all technological tools available to suppress codling moth and other pests. The primary technique employed to suppress codling moth was mating disruption, supplemented with organophosphate spray applications when and where necessary to avert economic damage. All blocks with exterior borders received border treatments of azinphosmethyl at 1st cover timing. Subsequent treatment decisions were based on pheromone trap catch and visual inspection of fruit for injury.

A comprehensive insect monitoring program was conducted based on 10 acre (or less) sample blocks. Analogous comparison blocks consisting of 2 Red Delicious, 2 Golden Delicious and 2 pear plantings were simultaneously monitored for primary and secondary pests and beneficial insect activity. Overall codling moth damage to fruit at harvest was minimal in the areawide project (0.2%) and somewhat higher in the comparison blocks (0.8%). Of the 50 sample blocks, 20% had no detectable CM damage and 94% had less than 0.5% damage at harvest. The most severe damage tended to be in the vicinity of bin or prop piles. These areas also tended to have elevated pheromone trap captures during the first generation.

Pandemis leafroller populations increased somewhat over the course of the season (mean pheromone trap captures for season: areawide=227, comparison=170) and resulted in relatively higher levels of fruit damage than were observed in comparison blocks (% fruit damage: areawide=0.23, comparison=0.13).

Low to moderate levels of white apple leafhopper, western tentiform leafminer (WTLM) and aphids were observed throughout the area with some treatments directed at aphids and leafhoppers. WTLM parasitism rates were higher in areawide blocks than conventional comparison blocks and aphid predators were more abundant in areawide blocks.

The pear pest management program consisting of one pre-bloom application of fenoxycarb (Comply) and one post-bloom application of abamectin (Agrimek) appeared to be a very successful approach to keeping psylla populations in check, while preserving beneficials. Pear psylla populations were generally quite low, both in areawide and comparison blocks, however we did observe more predators in areawide blocks and increased postharvest psylla populations in comparison blocks.

A partial analysis of cull fruit suggested that fruit damage by all insects was relatively minor compared to other causes of downgrading (10 to 20% of cull fruit due to insect damage).