

Biological Control

Development of kairomone-based mass-trapping control of codling moths in Californian walnuts and apples

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Abstract: The mass-trapping technique to control codling moth populations was investigated using a dual lure, a combination of the pear-ester kairomone and codlemone pheromone. The goals of the mass-trapping studies were to: 1) to simulate the potential of other kairomone-based controls (e.g., attract and kill), 2) demonstrate a control strategy for small acreage organically managed orchards, and 3) demonstrate a control strategy for orchard borders to eliminate immigration of mated-gravid CM females. Number-placement of traps in orchards was studied to increase mass-trapping efficacy. Occurrence-degree of nut damage was evaluated by nut drop, canopy infestation, and harvest injury/damage. Seven replicated three acre plots of walnuts (three organic, two conventional, and two mating disruption) and two apple plots were set up to evaluate the use of mass trapping as a population control measure over the entire season.