

## Walnut Pest Management Alliance: A Research and Implementation Project

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The primary objective of the walnut Pest Management Alliance (PMA) is to reduce use of pesticides in walnuts by continuing to refine the techniques for codling moth control using pheromone mating disruption. Application technology for pheromone-based mating disruption continues to evolve, and the walnut PMA is flexible enough to incorporate emerging technology.

In the last several years, the walnut PMA has successfully demonstrated codling moth management using pheromone mating disruption (PMD) in a sprayable formulation applied at very low rates with a conventional orchard sprayer. In 2005, the PMA tested two different tactics for the application of PMD. The sprayable formulation was applied with a custom-made Ultra Low Volume applicator in order to reduce application costs. Also in 2005, two long-term area-wide trials (total acreage greater than 700) were started using aerosol pheromone puffers. The aerosol puffer units are hung high in the tree canopy at a rate of one unit per 2 acres, and are designed to emit pheromone all season. The two puffer trials continue in 2006 with the goal of reducing the use of insecticide supplements. Large-scale testing of pheromone laminate flakes was begun in 2006 at three locations. The flakes are applied with a helicopter using a custom-made bucket dispenser. The flakes stick in the top of the tree and emit pheromone for 60-75 days.

The walnut PMA maintains a strong alliance between the walnut industry, UC researchers, UC farm advisors, BIOS partners, DPR representatives, grower cooperators and PCA's. At the beginning of each year, these groups meet to share trial results and to ensure the project is addressing current pest management issues, both local and state-wide. Insight from these partners helps the project to remain current in its focus. Input from end users, such as PCA's and growers, is especially important as we hope to move towards wider adoption of reduced risk pest management systems.



Helicopter with bucket applying Hercon laminate flakes, May 2006, Glenn Co.



Pheromone aerosol puffer on rope to raise it into top of tree canopy, June 2005, Glenn Co.