

LEAFROLLER MATING DISRUPTION AND ITS USE IN COMMERCIAL ORCHARDS

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*Abstract:* The effect of hand-applied pheromone dispensers (Pacific Biocontrol) and sprayable pheromone (3M Corporation) was evaluated for obliquebanded and pandemis leafroller in 12 commercial orchards. Sprayable experiments consisted of approximately 30 acres divided into three ten-acre blocks with two treatments (20 and 40 grams AI per acre) and a non-pheromone treated comparison. Hand applied dispenser experiments consisted of approximately 30 acres divided into three ten-acre blocks with two treatments (80mg dispensers x 400 dpa and 250mg dispensers x 200 dpa) and non-pheromone treated comparison. Another experiment was conducted using the same criteria for the hand applied dispensers but added a fourth treatment (80mg dispensers x 200 dpa). Each block was monitored with large delta-style traps baited with a standard load pheromone lure, a high-load pheromone lure or an acetic acid food-based lure that monitored both female and male activity. Females collected from the acetic acid baited traps were dissected in the laboratory for mating success. Larval densities were evaluated throughout the season and fruit injury was monitored at harvest.

Although both sprayable and hand applied dispensers reduced capture in pheromone-baited traps, no consistent pattern of decreased larval populations was noted. Mating success was reduced in the hand-applied dispenser blocks at all locations, however the same pattern was not observed in the sprayable pheromone blocks.