

## Mating Disruption/SIR

Howard Flat CAMP Site—1996

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Howard Flat represents a pome fruit production area that models many sites typical of northcentral Washington. It encompasses approximately 1,200 acres and is relatively isolated from other fruit growing areas in the region. In the second year of the Codling moth Areawide Management Project (CAMP), progress was made in reducing codling moth populations while reducing broad-spectrum insecticide use and crop loss due to this pest. The Howard Flat project was organized by growers and industry fieldmen interested in the implementation of new pest management technology. The Howard Flat Management Board (HFMB) oversees the details of operating the project and secures and manages funding from the USDA. Kelly Denton, the project coordinator, oversees the day-to-day activities of the project, facilitating data collection and dissemination of information and communication between project participants.

Pheromone dispensers (Isomate-C plus®, Pacific Biocontrol, Inc.) were applied at a rate of about 400 per acre. Pheromone on 80% of the acres was placed by the growers, demonstrating that they had gained confidence in being able to manage this task as a part of their normal orchard operation. Approximately 460,000 dispensers were placed in the orchards on Howard Flat in a 14-day period.

### **Codling Moth**

During the first codling moth generation in 1996, 594 moths were captured compared to a total of 3,319 moths that were captured during the first generation in 1995, a reduction of 82%. During the second codling moth generation in 1996, 114 moths were captured compared to 610 in 1995, a reduction of 81%. Fruit injury by codling moth following the first generation averaged 0.03%, range 0.0 to 0.4%. At harvest 3,386 bins were sampled from 82 blocks. The overall average fruit injury by codling moth was 0.20%, down from 0.55% in 1995 and an estimated 0.8% in 1994. Removing four blocks that had high levels of damage drops the average level of fruit injury to 0.05%.

### **Leafrollers**

One hundred seven traps, one every 10 acres, were used to monitor pandemis (PLR) and obliquebanded (OBLR) leafrollers. The total number of leafrollers on a basis of moths per trap was about the same in 1995 and 1996. However, the average number of PLR moths per trap was less in 1996 (13) than in 1995 (24) while the number of OBLR moths in 1996 (16) was higher than in 1995 (12). Trapping leafrollers on a regional basis provided a good pattern of relative activity and pointed to orchard blocks with the highest risk of larval infestation. The average fruit damage by leafrollers at the Howard Flat CAMP site was 0.21%. Damage tended to be

concentrated in the same areas that had the highest leafroller moth trap counts, i.e., the northeastern part of Howard Flat.