

Fig. 1. Total seasonal codling moth counts and percent trap reduction (counts in MD plots versus conventional plots) for 1X pheromone baited traps for 3 walnut and 3 pear orchards.

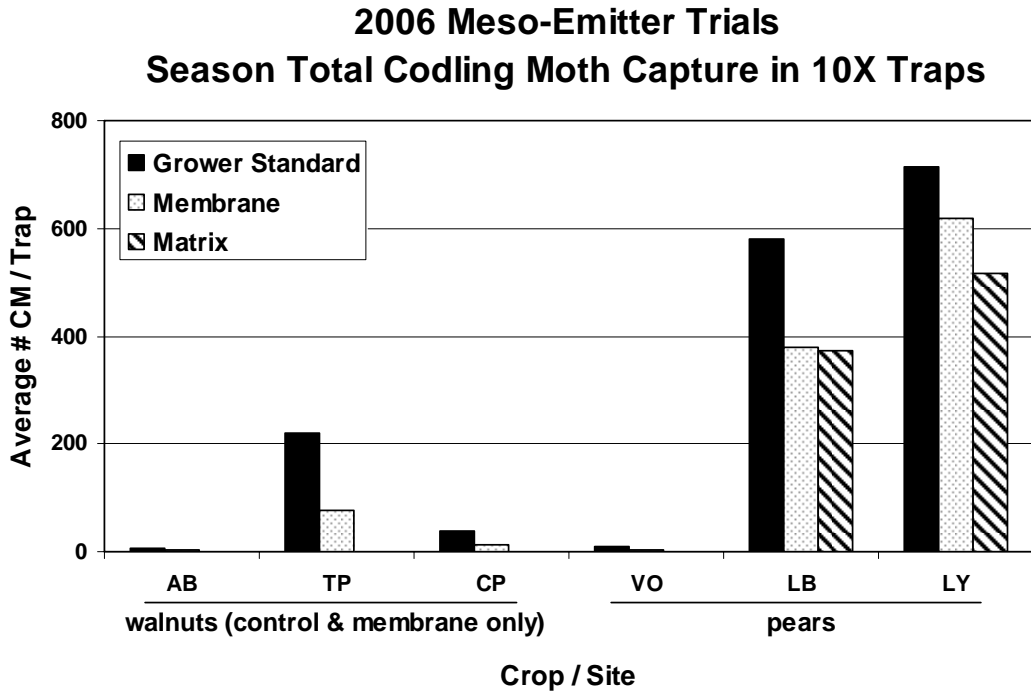


Fig. 2. Total seasonal codling moth counts for 10X pheromone baited traps for 3 walnut and 3 pear orchards.

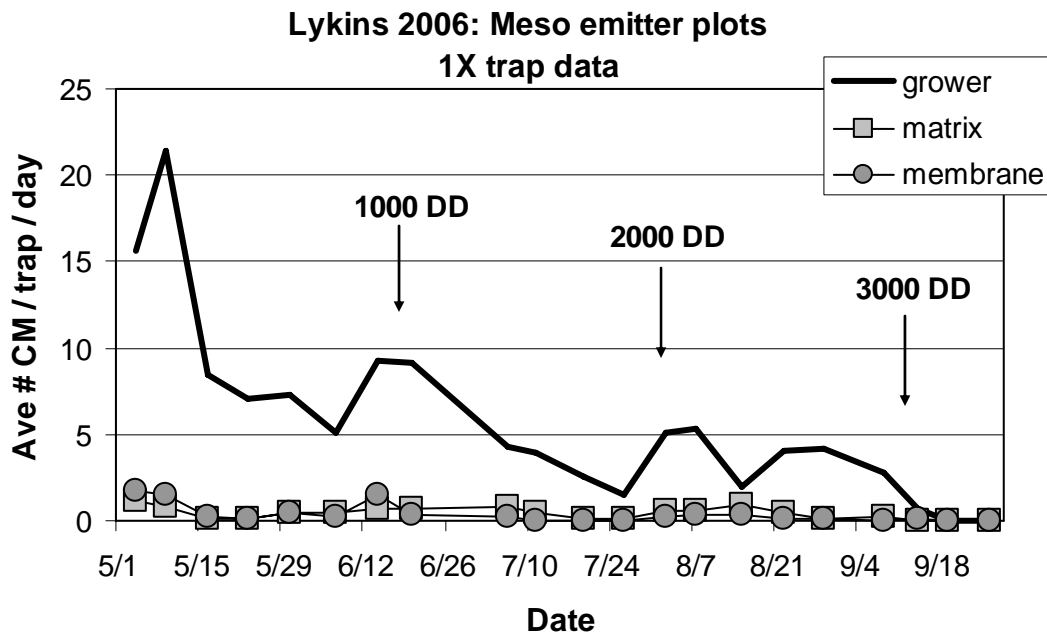


Fig. 3 Codling moth trap counts per day in 1X pheromone lure baited traps for the conventional grower standard, the mating disruption (MD) wax matrix + grower standard, and the MD membrane dispensers plus grower standard plots in the Lykin orchard.

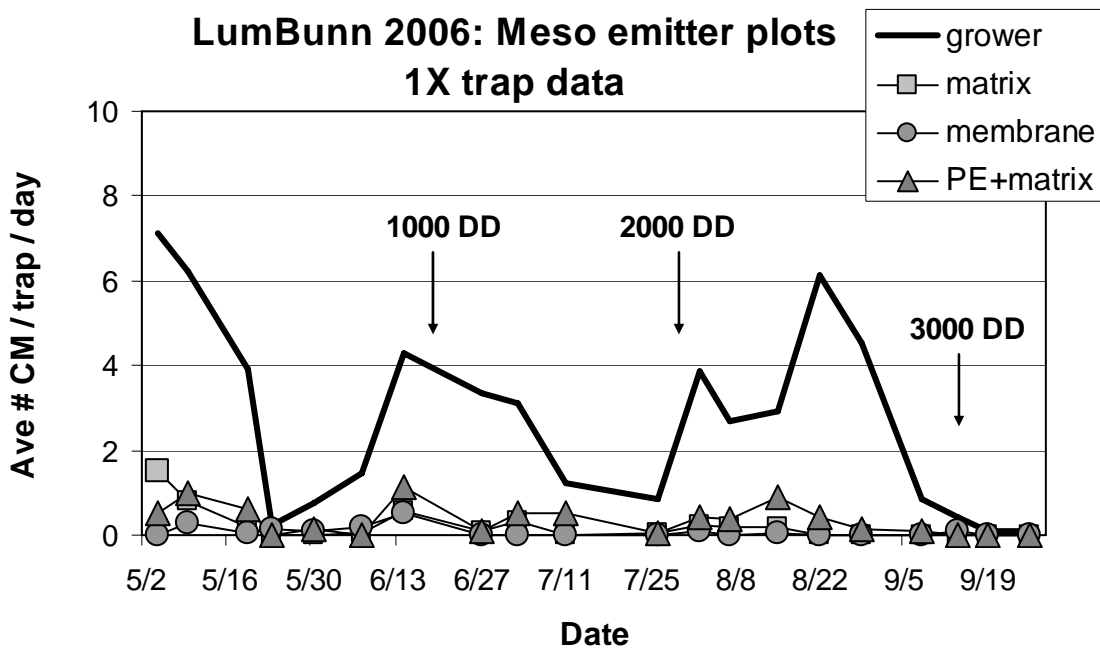


Fig. 4. Codling moth trap counts per day in 1X pheromone lure baited traps for the conventional grower standard, the mating disruption (MD) wax matrix + grower standard, MD membrane dispensers + grower standard, pear ester flakes (PE) + MD wax matrix + grower standard in the LumBunn orchard.

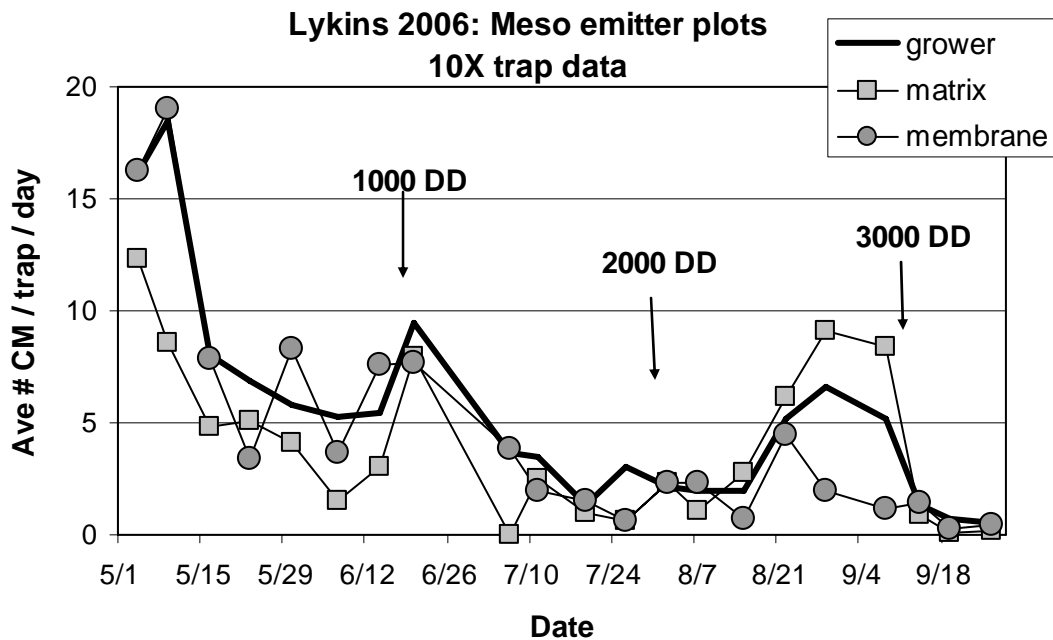


Fig. 5. Codling moth trap counts per day in 10X pheromone lure baited traps for the conventional grower standard, the mating disruption (MD) wax matrix + grower standard, and the MD membrane dispensers plus grower standard plots in the Lykin orchard.

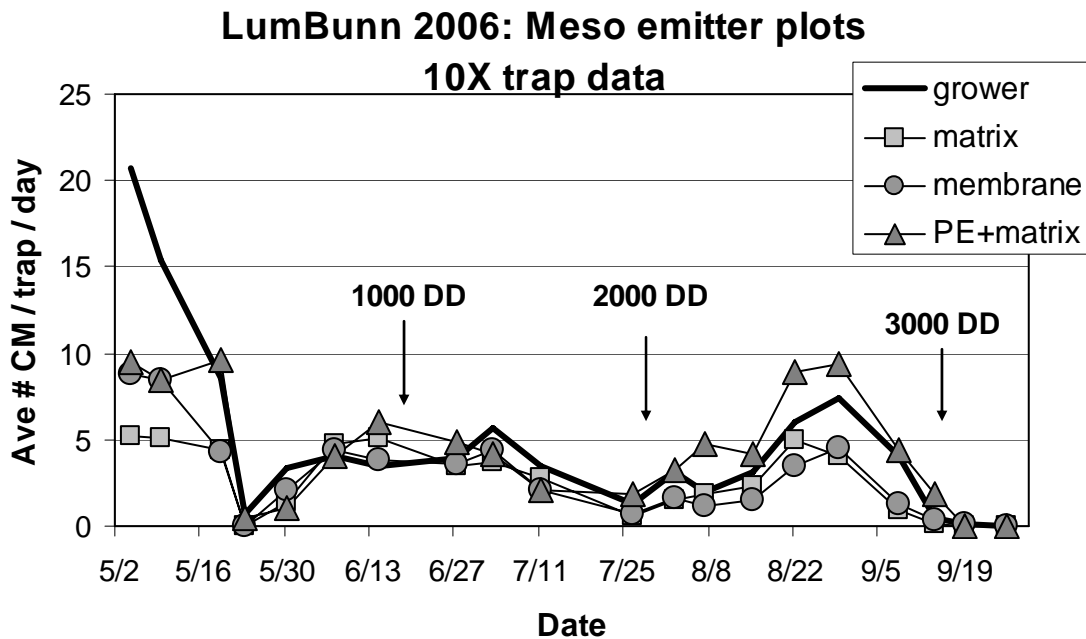


Fig. 6. Codling moth trap counts per day in 10X pheromone lure baited traps for the conventional grower standard, the mating disruption (MD) wax matrix + grower standard, MD membrane dispensers + grower standard, pear ester flakes (PE) + MD wax matrix + grower standard in the LumBunn orchard.

**Podesta Walnuts 2006:  
1X trap data**

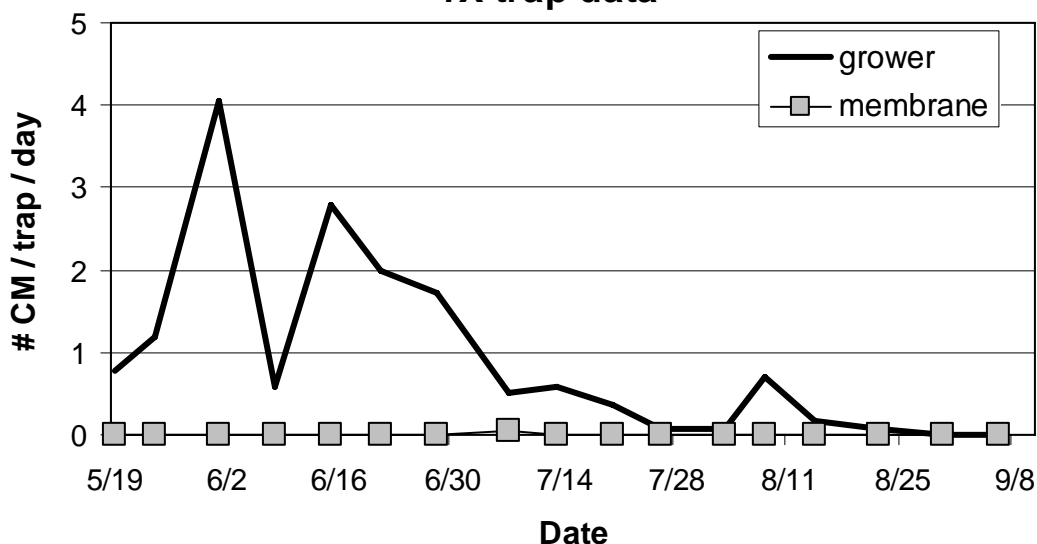


Fig. 7 Codling moth trap counts per day in 1X pheromone lure baited traps for the conventional grower standard and the MD membrane dispensers plus grower standard plots in the Podesta orchard.

**Prichard Walnuts 2006:  
1X trap data**

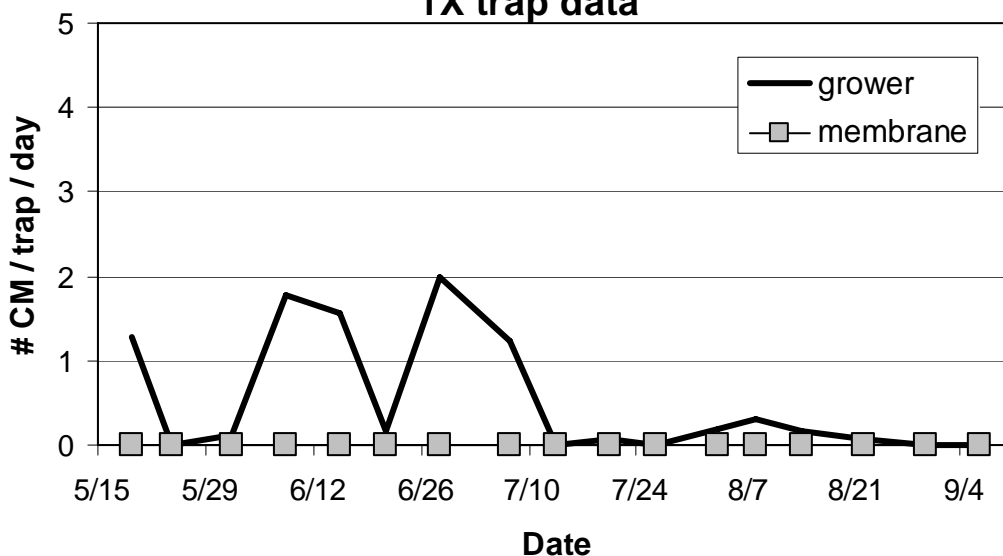


Fig. 8 Codling moth trap counts per day in 1X pheromone lure baited traps for the conventional grower standard and the MD membrane dispensers plus grower standard plots in the Prichard orchard.

**Podesta Walnuts 2006:  
10X trap data**

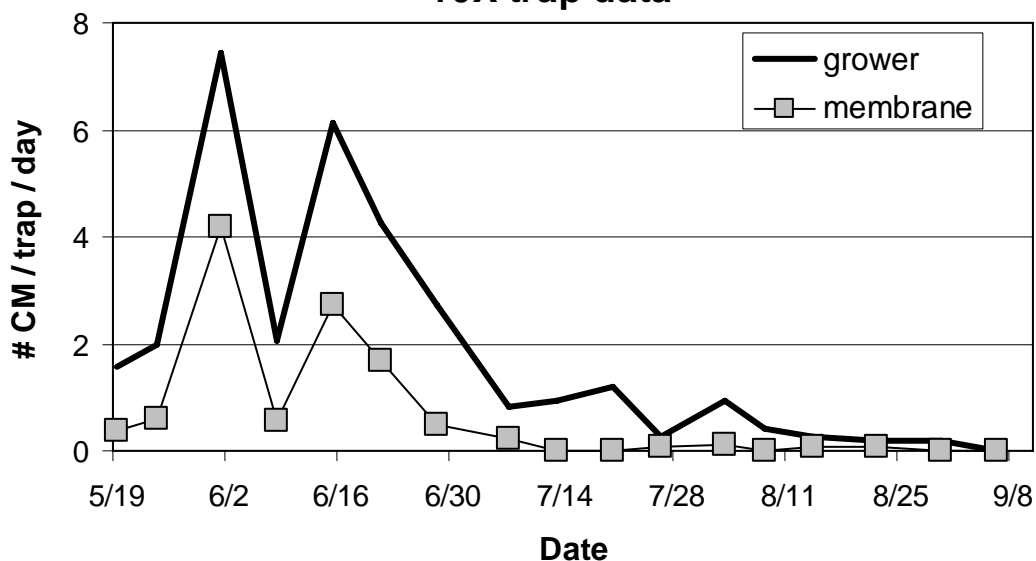


Fig. 9. Codling moth trap counts per day in 10X pheromone lure baited traps for the conventional grower standard and the MD membrane dispensers plus grower standard plots in the Podesta orchard.

**Prichard Walnuts 2006:  
10X trap data**

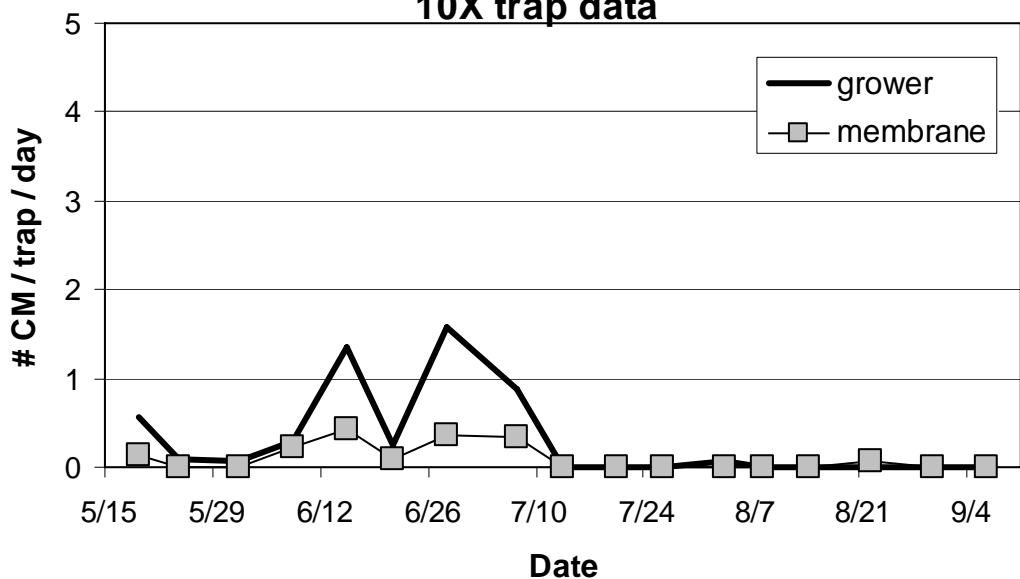


Fig. 10. Codling moth trap counts per day in 10X pheromone lure baited traps for the conventional grower standard and the MD membrane dispensers plus grower standard plots in the Prichard orchard.

### 2006 Pears: CM Damage in Meso-Emitter Treated Plots

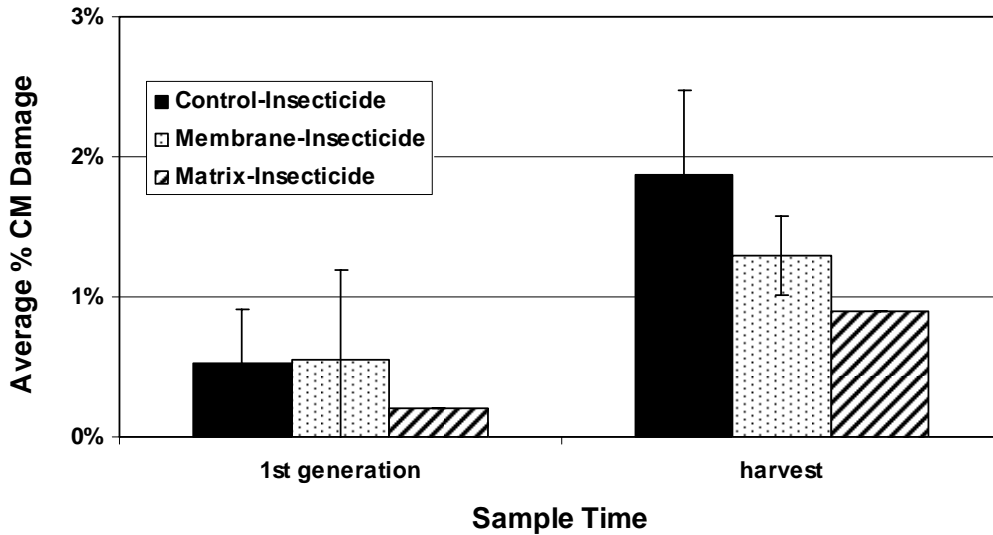


Fig. 11. Mean codling moth damage in meso-emitter treated plots (wax matrix and membrane dispensers) plus insecticides compared to standard insecticide program.

### 2006 Pears: Codling Moth Damage in Meso-Emitter Plots

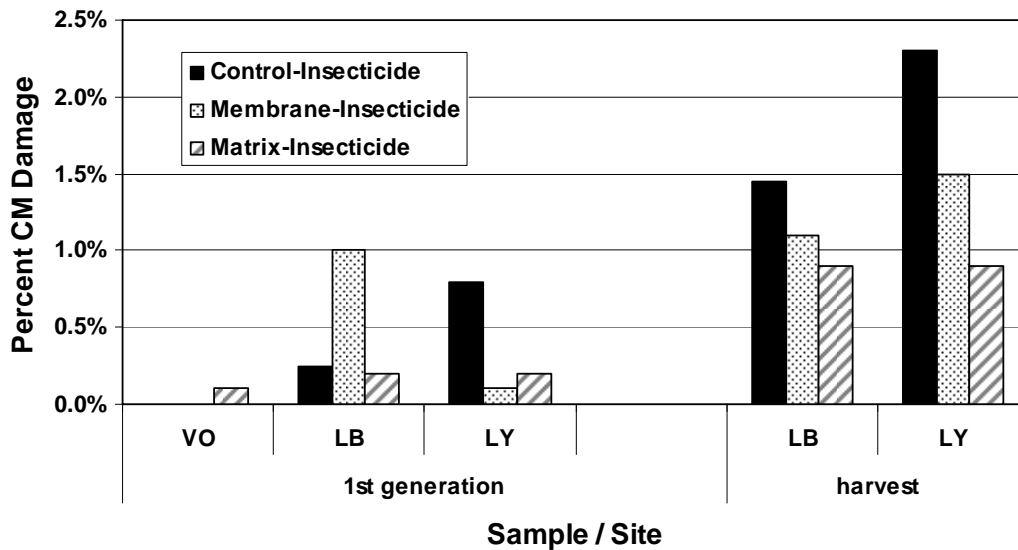


Fig. 12. Mean codling moth damage in individual meso-emitter treated plots (wax matrix and membrane dispensers) plus insecticides compared to standard insecticide program. VO was not treated with insecticides, whereas LB and LY received full seasonal insecticide programs.

### 2006 Pears: Damage Difference in Meso Membrane and Matrix Pheromone Plots vs Control Plots

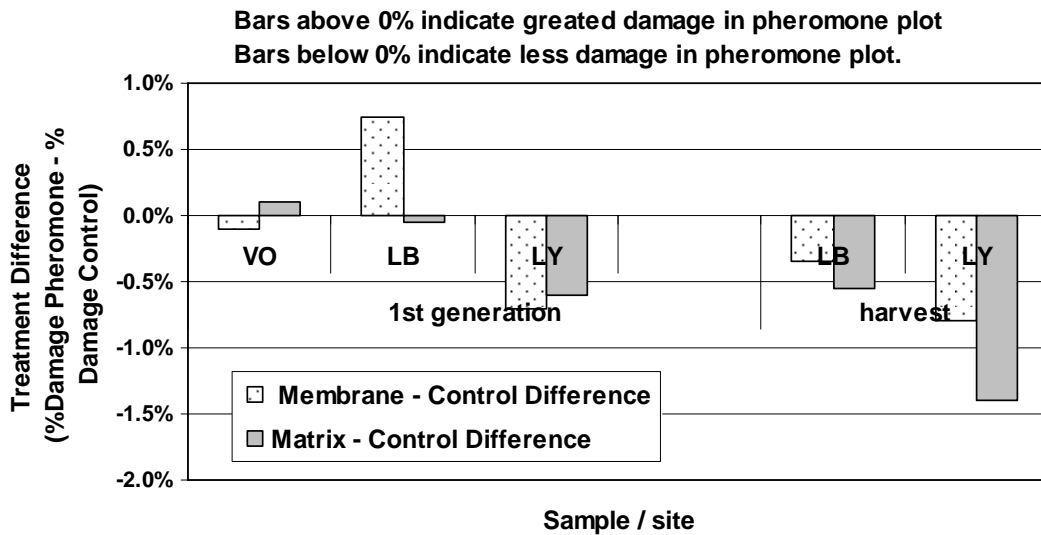


Fig. 13. Difference in codling moth damage between MD plots versus conventional plots. Bars rising above the 0% line suggest no treatment benefit, whereas bars sinking below the 0% line suggest additional suppression.

### 2006 Walnuts: CM Damage in Meso-Emitter Plots

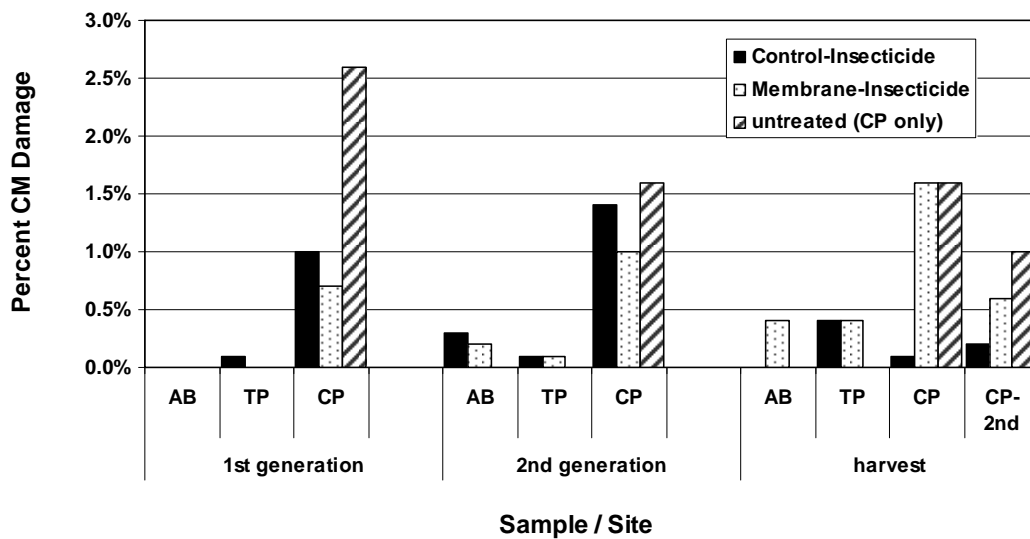


Fig. 14. Mean codling moth damage in individual meso-emitter treated plots (wax matrix and membrane dispensers) plus insecticides compared to standard insecticide program in pears. All plots with the orchard received the same insecticide regimes.

2006 Walnuts: Damage Difference in  
Pheromone-Insecticide vs Insecticide Only Treatments

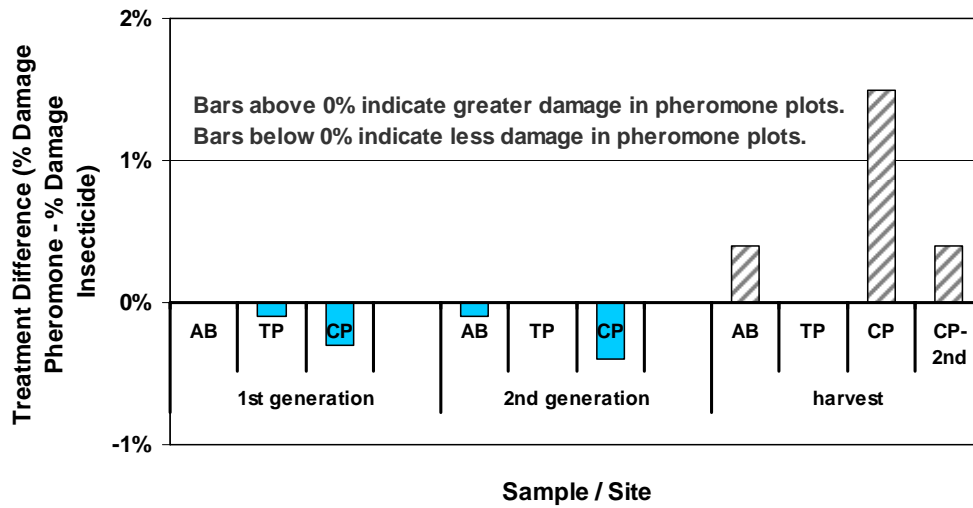
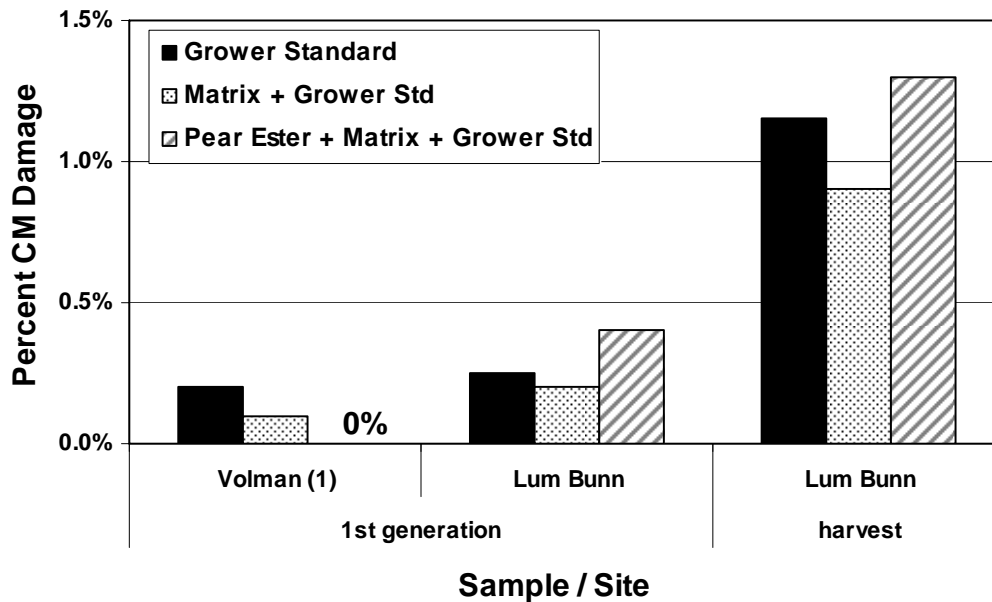


Fig. 15. Difference in codling moth damage between MD plots versus conventional plots in walnuts. Bars rising above the 0% line suggest no treatment benefit, whereas bars sinking below the 0% line suggest additional suppression.

2006 Pears: Codling Moth Damage  
in Meso-Matrix and Pear Ester Treated Plots



(1) Volman orchard had no sprays in the grower standard.

Fig. 16. Codling moth damage in plots treated with supplements of either the Matrix MD dispensers or Matrix and pear ester filled flakes.



**2006 Walnuts: Pear Ester Flake Trial  
Season Total Trap Catch of Codling Moth**

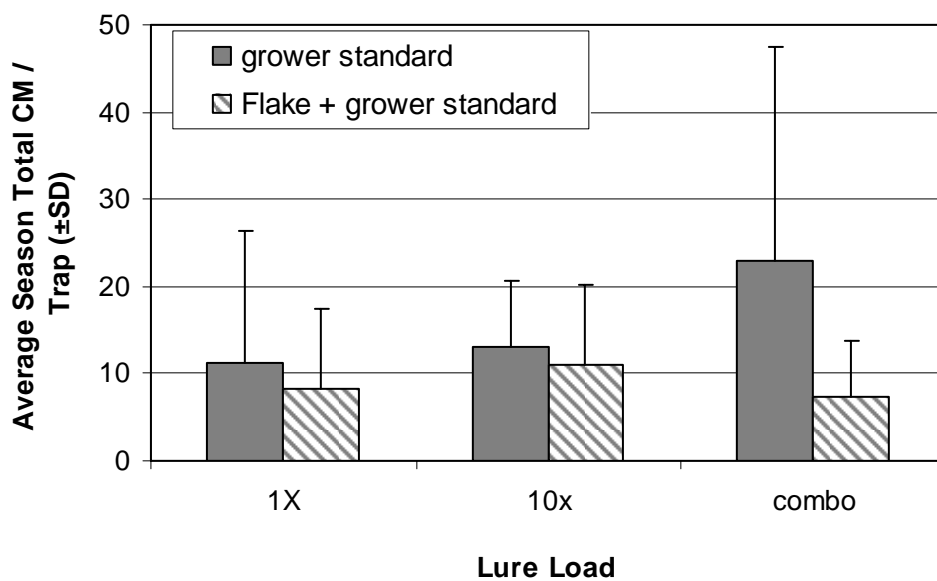


Fig. 17. Average seasonal totals in traps baited with 1X, 10X, and combo lures for plots treated with either the grower insecticide standard or the standard plus the pear ester flakes.

**2006 Walnuts: Pear Ester Flake Plots  
1X trap data**

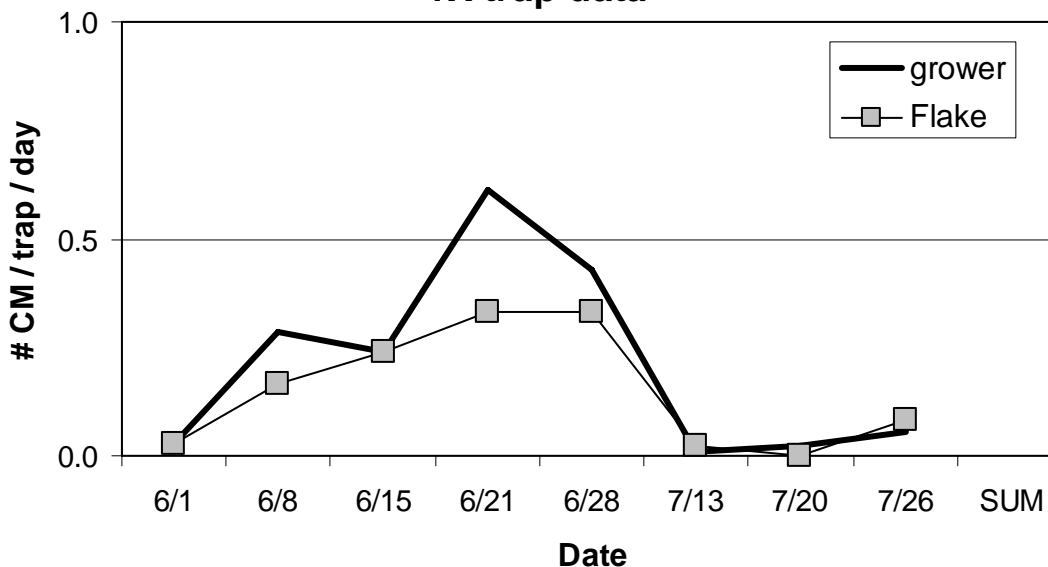


Fig. 18. Coding moth flights per trap per day in 1X baited traps in plots treated with the grower standard or the grower standard plus the pear ester flakes.

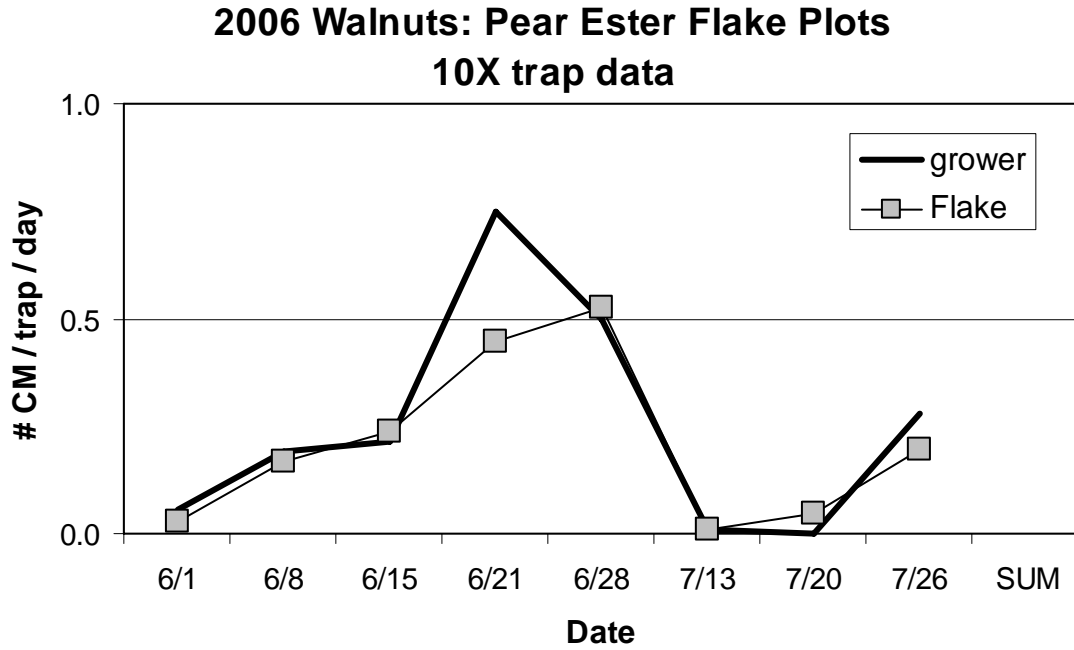


Fig. 19. Coding moth flights per trap per day in 10X baited traps in plots treated with the grower standard or the grower standard plus the pear ester flakes.

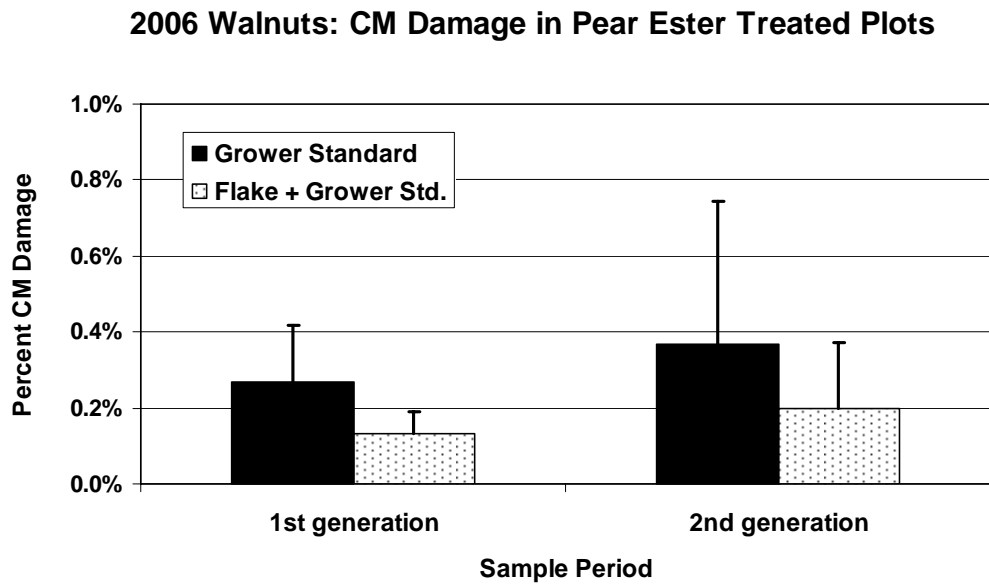


Fig. 20. Codling moth damage after the first and second generation flights in the grower standard plots or plots treated with the grower standard plus the pear ester flakes.

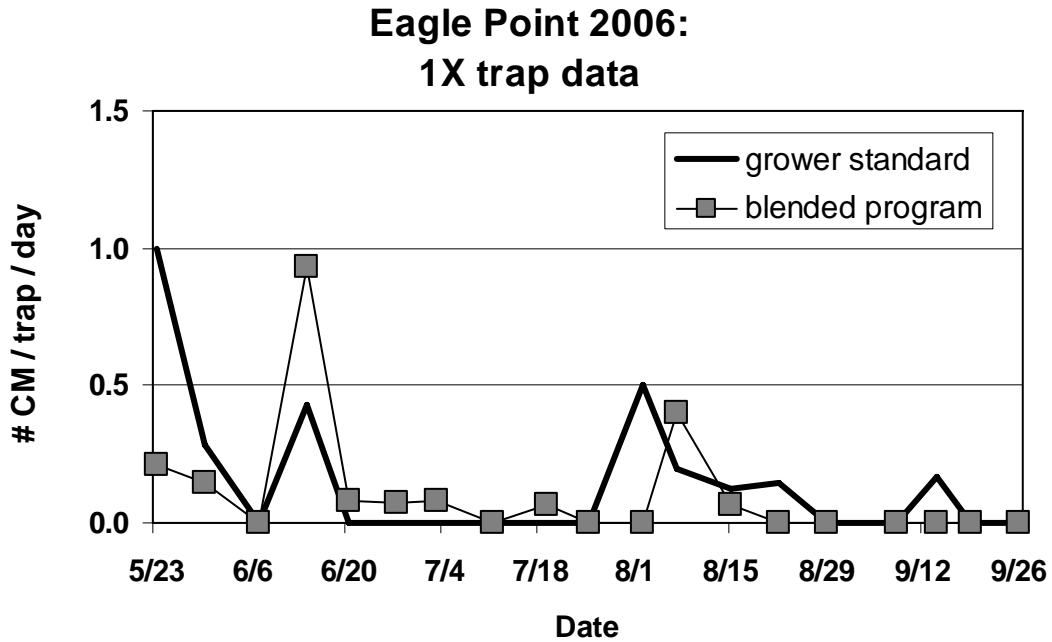


Fig. 21. Codling moth trap capture in traps baited with 1X lures for the standard grower program compared to the standard grower program plus applications of the granulosis virus, Cyd-X.

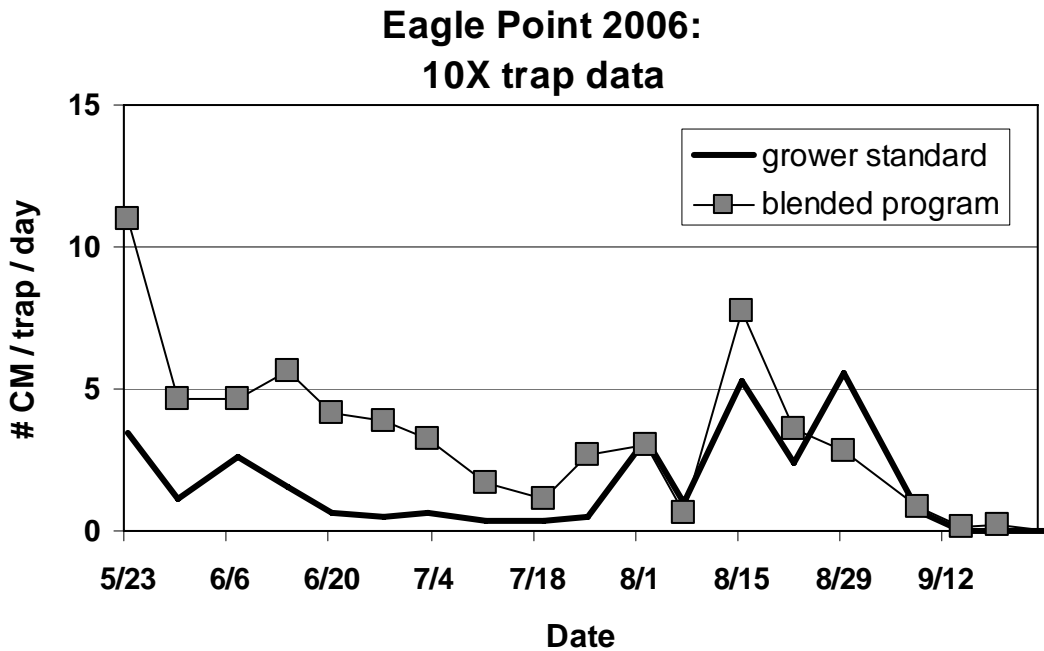


Fig. 22. Codling moth trap capture in traps baited with 10X lures for the standard grower program compared to the standard grower program plus applications of the granulosis virus, Cyd-X.

**Aldrich 2006:  
1X trap data**

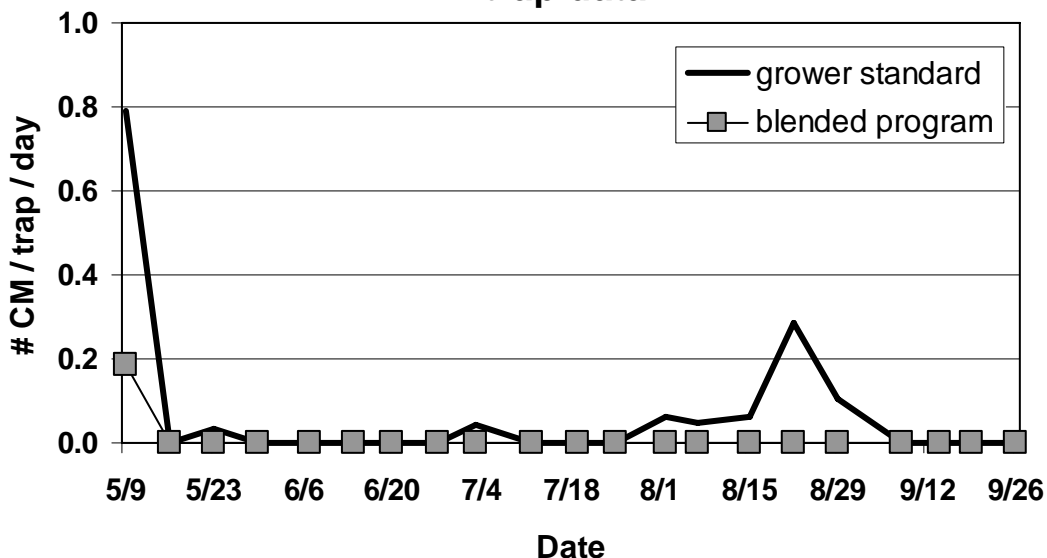


Fig. 23. Codling moth trap capture in traps baited with 1X lures for the standard grower program compared to the standard grower program plus applications of the granulosis virus, Cyd-X, Entrust, and oil.

**Aldrich 2006:  
10X trap data**

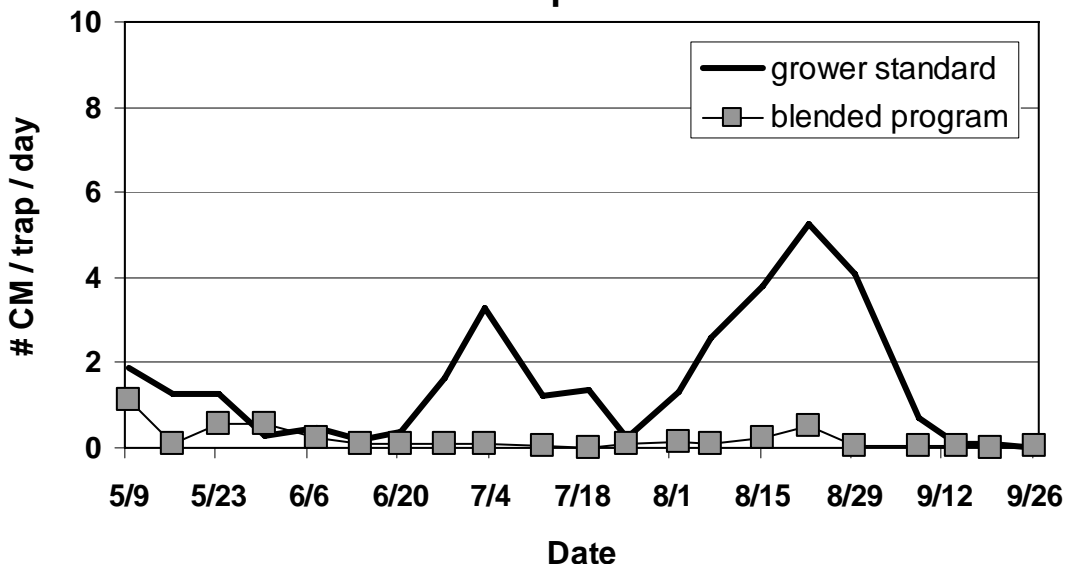


Fig. 24. Codling moth trap capture in traps baited with 10X lures for the standard grower program compared to the standard grower program plus applications of the granulosis virus, Cyd-X, Entrust, and oil.

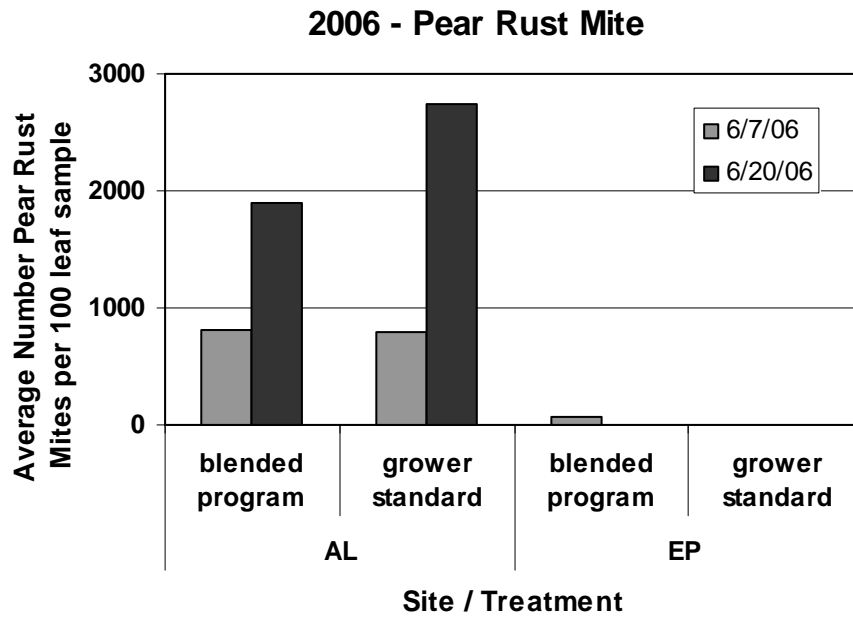


Fig. 25. Comparison of the blended and standard programs for effects on the pear rust mite.

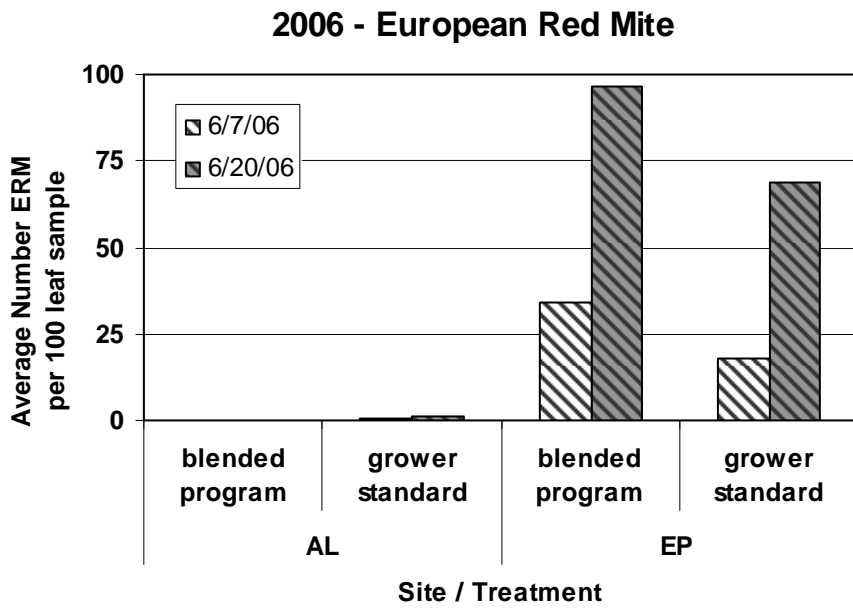


Fig. 26. Comparison of the blended and standard programs for effects on the European red mite.



Fig. 27. Wind tunnel for assessing flight behavior of codling moth.

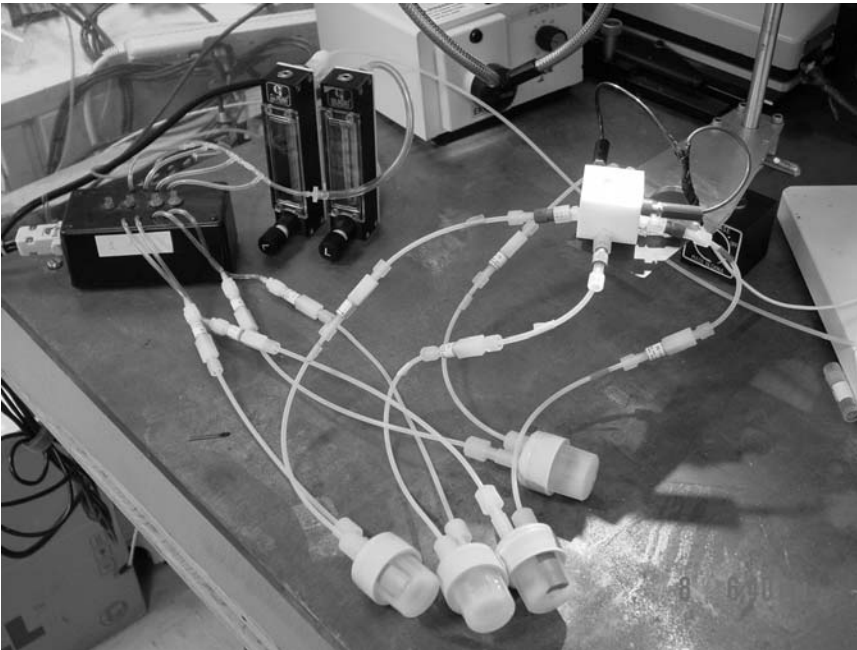


Fig. 28. EAG apparatus for assessing codling moth antenna responses to odor stimuli.