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**SUISUN VALLEY
Pear Pest Management Alliance
2001 Final Report**

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Abstract

In 2000, five growers (seven total orchards) in the Pear PMA used mating disruption for Codling moth with generally good results. All 5 growers intended to continue the program during 2001. However, due to lack of a cannery contract until just prior to harvest, none of the growers felt able to make the financial commitment to apply MD dispensers. One grower opted to participate in a pheromone puffer trial conducted through the University of California.

CM trap catches can be suppressed in conventional orchards adjacent to disrupted orchards. This trap suppression doesn't necessarily reflect suppression of mating. CM monitoring was conducted in areas near the puffer trial to determine the impact of the puffer trial on trap counts in non-treated orchards.

Four of the seven blocks that used MD in 2000 were monitored in 2001 to assess the carryover impact of CM population reduction. (2 of the other previously treated blocks were removed between seasons. The other was monitored as part of the puffer trial).

Efforts also went into assistance in finding cooperators for the puffer trial and for other area trials with sprayable MD pheromones.

Background

Most pear orchards in the Suisun district are smaller than in other pear districts. The district is known for windy conditions. (Suisun means "west wind" in the local indigenous tongue.) The trees are trained in a very open style and are widely spaced in the typical orchard. All of these factors make it more difficult for MD to be as successful as in other situations.

Results

Impact of Puffers in Adjacent Orchards– Traps in blocks adjacent to disrupted blocks can often be suppressed without a proportional suppression of mating. Traps were placed in the blocks near a puffer trial (**Chart 2**). Most were "pairs" of 1X & 10X pheromone traps separated by 100 feet. Six of these pairs of traps were placed at 200-foot intervals directly downwind from the puffers. Additional pairs of traps were placed in other areas indicated in **Chart 2**. The assumption was that a 10X trap might be a better indicator of CM activity near the puffers and that at some distance from the puffers, the standard 1X trap would become the better tool. In previous trials, 1X traps were shut down up to 1800 feet from puffers. The CM population in this orchard was large. Traps catches ranged from 120-190 moths/season in 2000.

In this trial, there was some indication that the 1X trap became more effective at 1000-1200 feet. In locations less than 1000' from the puffers, 10X traps were generally a more reliable indicator. A more extensive trial is required for statistical significance. This trial indicates it would be prudent to use more than one type of trap in blocks adjacent to puffer-disrupted blocks.

Impact of Mating Disruption – Orchards that used MD in the 2000 season (“MD blocks”) had higher CM populations in 1999 than did other area orchards (145 moths/trap/season vs. 115 moths). Codling moth populations in the MD blocks were lowered in 2000. Even though these orchards did not have MD applied in 2001, CM populations continued to be lower in 2001 than in other area orchards (35 moths/trap/season vs. 95 moths/trap/season). This carryover impact is shown in **Chart 1**.

OP Insecticide Usage - In this district, 3-4 CM sprays per season is standard in non-MD orchards. In “MD blocks”, CM sprays were reduced in 2000 on average to 2.5 sprays, while nearly all non-MD blocks needed 4 sprays. In 2001, these former MD blocks averaged 3 CM sprays while non-MD blocks averaged 3.3 sprays.

In the non-MD blocks, there has been a reduction in the number of OP sprays since 1999 as growers have been more likely to use Asana (a pyrethroid) for one of the CM treatments.

Chart 1

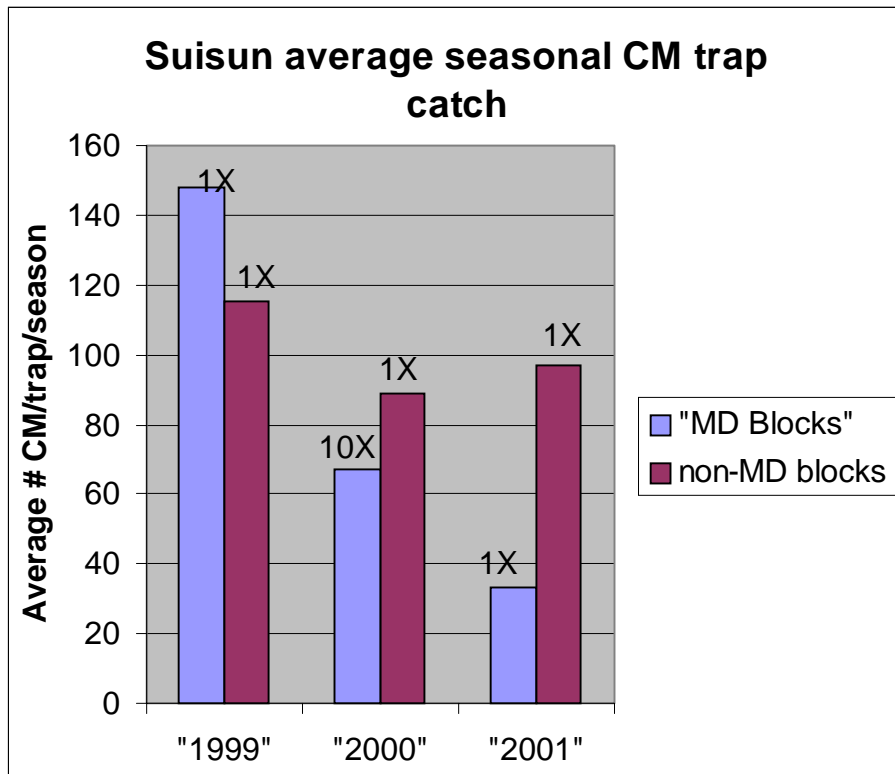


Chart 2 - GLASHOFF & ABERNATHY ORCHARDS - 2001

P - Puffer

X - Trap pairs, 1X & 10X

