

III. Stone Fruits

F. Implementation

1. Peach twig borer - plums

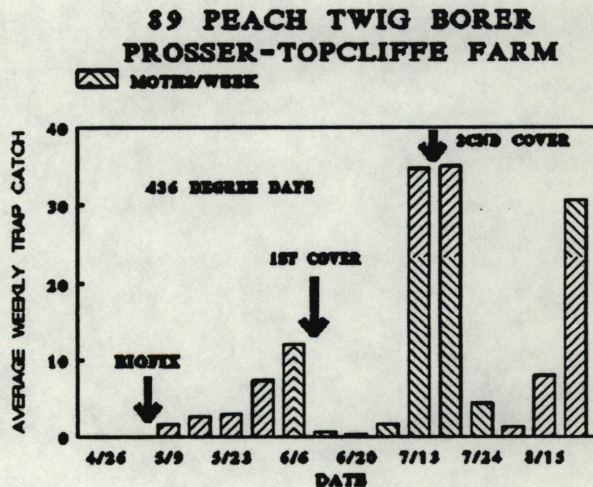
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Using degree days to time peach twig borer sprays in the Yakima Valley. Peach twig borer is generally not a severe pest of stone fruits in the Yakima Valley. In many parts of the valley the insect is either not present or controlled by pre-bloom organo-phosphate and oil applications. However, in the lower Yakima Basin from Prosser east to the Tri-Cities, peach twig borer is sporadically a serious pest of plums and prunes. Most often, the damage is caused by grower neglect of the orchard, particularly early Italian prune orchards.

However, in 1988, peach twig borer caused losses exceeding 30% in two well-managed President and Friar plum orchards. Since the growers had been following normal spray programs, they were at a loss as to what to do. Since plum plantings are increasing in the Yakima Valley and plum pest control will become increasingly important, this seemed like a good time to evaluate the WSU/UC peach twig borer phenology model for timing sprays and to compare it to normal spray timing.

This pilot project was done in a 4 acre President plum orchard east of Prosser which had sustained serious damage in 1988. Traps were placed in orchard in late April and checked daily until biofix by the grower. Pheromone dispensers were replaced at two week intervals by our office. Degree days were calculated by accessing weather records accumulated by

the Washington State University Public Agricultural Weather System from the WSU-IAREC-HQ station. This station is located about 3 miles north of the grower's orchard. Biofix was set on May 4 and, based on UC recommendations, control was applied on June 7 at 436 degree days after biofix. By July 13 peak trap catches had jumped to greater than twice the first summer adult peak and a second cover spray was applied on July 15. The plums were harvested August 20-26 and no fruit damage was noted. Interestingly, although WSU publications recommend summer peach twig



borer sprays to be applied about the first week of June, most growers in the Prosser area delay treating until the first part of July, which coincided with the peak of what appears to be second summer generation adult flight.

In spite of these relatively high catches, only 4 flags were noted in the block during late July and early August. These flags were found on interior trees.

After the 1989 season, a couple questions come to mind: In spite of what appeared to be correct spray timing, large male populations developed later in the season. Was this really poor timing or was this immigration from outside sources? The only nearby stone fruit orchard was treated identically to this one.

